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About ALLIX®

WHO WE ARE?

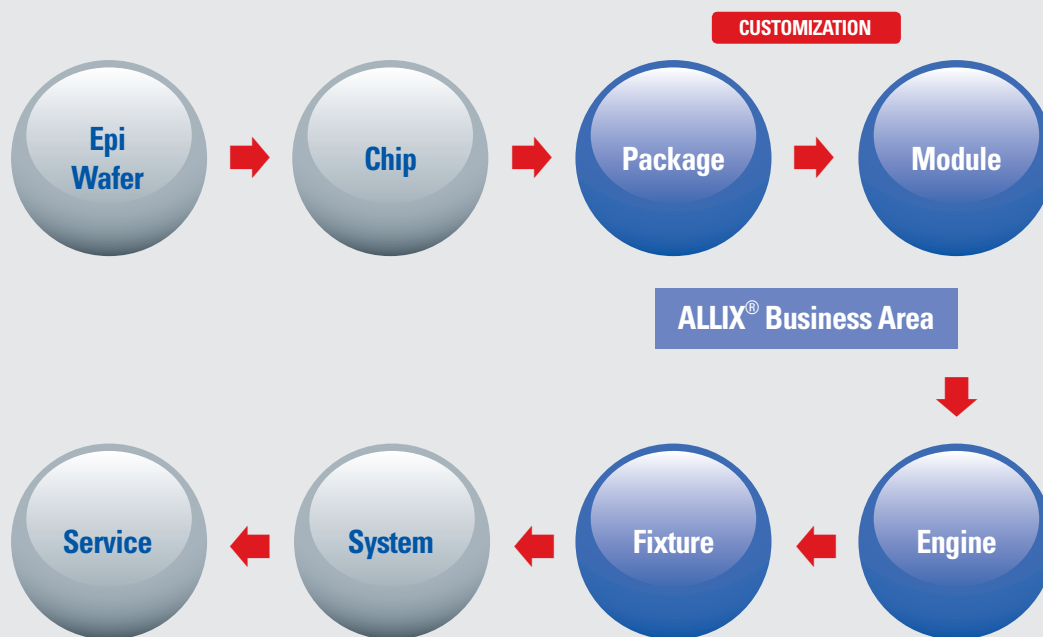
"WE ARE A HIGH QUALITY LIGHT CREATOR."

ALLIX Co., Ltd. was founded in 2003 as a LED package and module manufacturer. We have been devoted to developing the color-centered technology of representing the light as close to the natural sun light as possible.

WHAT WE DO?

"WE CUSTOMIZE YOUR NEEDS."

Each customer requires different light features. We tailor-make LED lights according to their requirement. For example, "3500K, $\pm 100\text{K}$ color rank tolerance, CRI(Ra)>95, R9>95" or "Make the bandwidth in green area wider and spread the red area." - You name it, we make it.



WHAT WE CAN CREATE TOGETHER?

"WE BELIEVE BETTER LIGHTING CAN BENEFIT THE HUMAN LIVES."

People spend as much time under the artificial light as they do in the daylight. Lighting affect our daily lives so much both in good ways and bad ways. But people do not seem to care that much about the lighting, thinking all whites are the same.

However, with the lights that fit us exactly, we feel more comfortable and become better-looking. These benefits lead respectively to improvement in work efficiency and to sales raise.

ALLIX® will help you design your own lighting, and you will feel more than just comfortable in your activity area.

ALLIX[®] Task Force Team for International Project Organization Chart



Company History

2017

- Oct. 2017 Released a new developed product, "XenoSun™" for premium LED lighting devices or finished products which emit spectrum similar to sun
- Sep. 2017 Achieved Advanced Technology Product Certificate by MOTIE, Korea
- Aug. 2017 Acquired KC Safety Certificate for Electronic Ballast for Electrodeless Fluorescent Lamp
- Aug. 2017 Signed Contract with LED Green Light International LLC, USA
- Jul. 2017 Signed Contract with euroLighting GmbH, Germany
- Jun. 2017 Signed Contract with EuroAsia GmbH, Germany
- May 2017 Acquired KC Safety Certificate for Recessed Luminaires for LED Lamps of APL1200(45) and APL600(45), respectively
- Feb. 2017 Released a new smart lighting device, ALLIX® MySel™
- Jan. 2017 Developed a new package, 4 IN 1 Top View 5050

2016

- Sep. 2016 Relocated and expanded ALLIX® headquarter and its plant
- Jun. 2016 Awarded "International LED&OLED : a new innovative technology-Museum, Art Gallery, Medical LED Package, Module, Lamp-development Company" by MOTIE, Korea

2015

- Dec. 2015 Achieved a government-funded research project by DTAQ, Korea(Development of identification of friend or foe LED lighting system)
- Dec. 2015 Achieved a government-funded research project by SMBA, Korea(Development of cycloaliphatic epoxy resin for LED encapsulment)
- Dec. 2015 Achieved a government-funded research project by MOTIE, Korea(Development of electrodeless lamp or system technology with 300W large output and 80lm/W high luminous efficacy)
- Aug. 2015 Certified LM80 for COB 26W
- Apr. 2015 Established ALLIX® Cherwon Enterprise Institute
- Apr. 2015 Established ALLIX® Cherwon Branch
- Feb. 2015 Company name changed from LEDst Co., Ltd. to ALLIX Co., Ltd.
- Jan. 2015 Certified UL Listed for SMD 5630, SMD 5450, SMD 3528, SMD 2835, Ø5 Leaded type, COB 18W, COB 26W, COB 39W
- Jan. 2015 Certified LM80 for SMD 5630

2014

- Dec. 2014 Certified RoHS Compliance for SMD 5630, SMD 5450, SMD 3528, SMD 2835 slug, Ø5 Leaded type, COB 18W, COB 39W
- Dec. 2014 Achieved ISO/TS16949:2009
- Jul. 2014 Signed an Agency Contract with ALTP & Associates, USA
- May 2014 Established a branch in Montrouge, France
- Apr. 2014 Established a branch in Dusseldorf, Germany

2013

- Dec. 2013 Awarded Korean World-Class Product Award 2013 from MOTIE, Korea
- Dec. 2013 Designated as a "Global Leading Company" by Jeonbuk Province of Korea
- Dec. 2013 Awarded University of Texas at Austin Globalization Commercial Group Contest
- Aug. 2013 Designated as a "Leading Company of Strategic Industry" by Jeonbuk Province of Korea
- Jul. 2013 Achieved a government-funded Project by MOTIE, Korea(Development of reliability enhancements technology of low current multi-chip COB module for export)
- Mar. 2013 Designated as a "Global IP Star Company" by Jeonbuk Regional Intellectual Property Center of Korea
- Jan. 2013 Received "Parts & Material Specialized Company" Certificate from MKE, Korea

2012

- Dec. 2012 Achieved a government-funded high class work force supporting project by KOITA, Korea
- Dec. 2012 Re-designated as a "Promising Export Firm" by SMBA, Korea
- Nov. 2012 Achieved a government-funded research project by Jeonbuk Province of Korea(Development of High Luminous Efficacy and CRI LED Linear Bar based on COB)
- Oct. 2012 Approved IEC 62471:2006 Certificate
- Oct. 2012 Designated as a "Promising Medium and Small-sized Enterprises" by Jeonbuk Province of Korea
- Aug. 2012 Achieved a government-funded research project by MKE, Korea(Development of high efficient, color rendering index and reliability LED lighting by 170lm/W multi-cell polygon LED package)

2011~2009

- Aug. 2011 Certified RoHS Compliance for SMD 5450 Type
- Jun. 2011 Achieved a government-funded research project by SMBA, Korea(Development of top view type high efficacy, high CRI (Ra99) LED Package)
- Mar. 2011 Achieved 2 Million US Dollars export contract for High CRI LED with a Japanese company
- Dec. 2010 Designated as a "Promising Export Firm" by SMBA, Korea
- Sep. 2010 Signed an export contract with a Japanese company (10 billion won a year)
- Jul. 2010 Increased of capital (14.2 hundred million won)
- Jun. 2010 Approved ISO 9001:2008 Certificate
- Oct. 2009 Approved R&D Center of the LEDst by KOITA
- Jun. 2009 Achieved a government-funded research project by SMBA, Korea(Development of High Luminance LED High Power Package)

2008~2003

- Oct. 2008 Company name changed from AnyOne to LEDst Co., Ltd.
- Jun. 2008 Approved ISO 14001:2004 Certificate
- May 2007 Registered in Korea Venture Business Association
- Dec. 2005 Certified RoHS Compliance for LED Module
- Mar. 2005 Signed an agreement of Industrial-educational cooperation with Wonkwang Health University
- Jun. 2003 Established AnyOne Corporation

ALLIX® Intellectual Property

No.	Classification	Status	Filing Date	Title	Serial No.	
1	Patent	KR	Registered	Oct. 2007	LED screen driver for block scan display	10-0769106
2	Patent	KR	Registered	Nov. 2008	LED dot matrix module	10-0869076
3	Patent	KR	Registered	Feb. 2009	Light-emitting diode and its Lead frame	10-0886784
4	Patent	KR	Registered	Feb. 2009	Light-emitting apparatus and its method And white series light-emitting diode	10-0886785
5	Patent	KR	Registered	Apr. 2010	A high-luminance LED package and method for manufacturing thereof	10-0954858
6	Patent	KR	Registered	Feb. 2012	LED lamp	10-1115957
7	Utility	KR	Registered	Mar. 2012	LED Light module for explosion proof lamp	20-0459504
8	Patent	KR	Applied	Apr. 2012	White LED using blue chip and green chip	10-2012-0044823
9	Patent	KR	Applied	Apr. 2012	White LED using blue chip and bluish green chip	10-2012-0044824
10	Patent	KR	Registered	Apr. 2012	Reflector for high illuminance lighting protected against dust and lighting thereof	10-1137298
11	Patent	KR	Registered	Jul. 2012	LED-package using plural LED chip	10-1170264
12	Trademark	KR	Registered	Apr. 2013	LEDST	40-0962462
13	Patent	KR	Registered	May 2013	LED light bar (COB linear bar)	10-2013-0052716
14	Patent	KR	Registered	May 2013	LED Light panel (COB Multi-Power)	10-2013-0052717
15	Design	KR	Registered	May 2013	LED chip mounted Circuit Board (COB linear bar)	30-2013-0025221
16	Design	KR	Registered	May 2013	LED chip mounted Circuit Board (COB Multi-Power)	30-2013-0025222
17	Patent	PCT	Applied	Jun. 2013	LED light bar (COB linear bar)	PCT/KR2013/005268
18	Patent	PCT	Applied	Jun. 2013	LED Light panel (COB Multi-Power)	PCT/KR2013/005269
19	Patent	KR	Applied	Aug. 2013	White LED package using phosphors (White LED using Near Violet chip)	10-2013-0103570
20	Patent	PCT	Applied	Aug. 2013	White LED package using phosphors (White LED using Near Violet chip)	PCT/KR2013/007811
21	Patent	KR	Applied	Nov. 2013	High CRI White LED using blue chip and phosphors	10-2013-0138251
22	Patent	PCT	Applied	Nov. 2013	High CRI White LED using blue chip and phosphors	PCT/KR2013/010350
23	Design	KR	Applied	Nov. 2013	Inner Box	30-2013-0059765
24	Trademark	KR	Registered	Nov. 2013	XENOLED	40-1062786
25	Patent	KR	Registered	Feb. 2014	Plasma processing apparatus	10-1369210
26	Patent	KR	Registered	Mar. 2014	Apparatus for Plasma Processing	10-1374627
27	Trademark	KR	Registered	Nov. 2014	ALLIX	40-2014-0076460
28	Patent	KR	Registered	Nov. 2014	Lighting Device	10-1464108
29	Patent	KR	Registered	Jun. 2016	Art Lighting LED device and module satisfying art lighting spectrum based on white LED device	10-165134
30	Patent	PCT	Applied	Dec. 2014	Art Lighting LED device and module satisfying art lighting spectrum based on white LED device	PCT/KR2014/011803
31	Patent	KR	Applied	Dec. 2014	COB Light Source Mounted Smart LED Indoor Lighting Apparatus	10-2014-0172684
32	Patent	PCT	Applied	Dec. 2014	COB Light Source Mounted Smart LED Indoor Lighting Apparatus	PCT/KR2014/011817
33	Patent	KR	Applied	Dec. 2014	LAMP FOR SMART DEVICE	10-2014-0173599
34	Patent	EP	Applied	Dec. 2014	White light emitting diode device for illumination using near UV light and phosphor	EP14198251.2
35	Patent	KR	Registered	Feb. 2015	Lighting Device	10-1495479
36	Patent	KR	Registered	Jun. 2015	Powder arrangement type plasma processing apparatus and method	10-1529565
37	Patent	KR	Registered	Jun. 2015	Powder separate absorption type plasma processing apparatus	10-1529572
38	Patent	KR	Applied	Aug. 2015	Fabrication Method of Pastel Tone LED Devices Using GAL, YAG and Nitride Phosphors	10-2015-0122491
39	Patent	KR	Applied	Aug. 2015	A Spheroid of Ntrides-based Nanocomposite, having a Single or Multi Core-Shell Structure	10-2015-0110745
40	Design	KR	Applied	Oct. 2015	Inner Box	30-2015-0053394
41	Patent	KR	Applied	Nov. 2015	Flood Lamp	10-2015-0153948
42	Patent	US	Applied	Nov. 2015	White light emitting diode device for illumination using near UV light and phosphor	14/949,553
43	Patent	KR	Applied	Dec. 2015	Art Lighting LED device and module satisfying art lighting spectrum based on white LED device using quantum dot	10-2015-0175541
44	Patent	KR	Applied	Dec. 2015	Color temperature variable type COB module	10-2015-0175585
45	Patent	KR	Applied	Dec. 2015	Color temperature variable type LED Lighting module	10-2015-0175637
46	Design	KR	Applied	Dec. 2015	Light Emitting LED Device	30-2015-0062244
47	Patent	PCT	Applied	Dec. 2015	Art Lighting LED device and module satisfying art lighting spectrum based on white LED device using quantum dot	PCT/KR2015/013499
48	Patent	PCT	Applied	Dec. 2015	Color temperature variable type COB module	PCT/KR2015/013501
49	Trademark	US	Applied	Dec. 2015	XENOLED	86/840,952
50	Trademark	EP	Applied	Dec. 2015	ALLIX	14887863
51	Patent	PCT	Applied	Dec. 2015	A Spheroid of Ntrides-based Nanocomposite, having a Single or Multi Core-Shell Structure	PCT/KR2015/013817
52	Patent	KR	Applied	Jan. 2016	Lighting device for identification friend or foe	10-2016-0002025
53	Patent	KR	Registered	Mar. 2016	Lighting Device	10-1601531
54	Patent	KR	Applied	Mar. 2016	Lamp for smart device with inserted battery	10-2016-0035447
55	Patent	KR	Applied	Mar. 2016	LED lighting system	10-2016-0038833
56	Patent	KR	Applied	Mar. 2016	Lighting LED device	10-2016-0038834
57	Trademark	KR	Applied	Apr. 2016	Mysel	40-2016-0027340
58	Patent	KR	Applied	Jun. 2016	LED Package	10-2016-0075012
59	Patent	KR	Applied	Nov. 2016	LED Package	10-2016-0147969
60	Trademark	US	Registered	Nov. 2016	ALLIX	5091839
61	Patent	KR	Applied	Nov. 2016	Fixing Jig for switch soldering	10-2016-0153358
62	Patent	US	Applied	Dec. 2016	LED Package	15/370837
63	Trademark	KR	Applied	Dec. 2016	mongsil	40-2016-0111478
64	Trademark	KR	Applied	Dec. 2016	mongsil	40-2016-0111479
65	Patent	KR	Applied	Dec. 2016	LED/OLED ICT fusion technology for sports event	10-2016-0170603
66	Patent	KR	Applied	Mar. 2017	Auto soldering device	10-2017-0029677
67	Patent	KR	Applied	Mar. 2017	Forming jig and soldering method using the same	10-2017-0029678
68	Patent	PCT	Applied	Jul. 2017	LED package	PCT/KR2017/007628
69	Trademark	KR	Applied	Oct. 2017	XenoSun	40-2017-0135213

Product Certification

Product Performance Certification



LM80 - SMD 5630



LM80 - COB 26W



UL8750- SMD & Ledged



UL8750 - COB

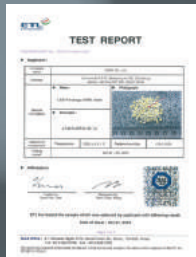
Product Safety Certification



RoHS - SMD 5630



RoHS - SMD 5450



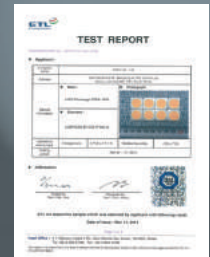
RoHS-SMD 3528



RoHS-SMD 2835



RoHS-Leaded Ø5



RoHS - COB 18W



RoHS-COB 39W



CE:IEC62471 - SMD 5630



CE:IEC62471 - SMD 5630(XL)



CE:IEC62471 - SMD 5450



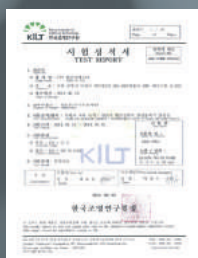
CE:IEC62471 - SMD 5450(XL)



CE:IEC62471 - SMD 3528



CE:IEC62471 - SMD 3528(XL)



CE:IEC62471 - Ledged Ø5



E:IEC62471 - COB 6W(XL)



CE:IEC62471 - COB 26W

Quality Management System Certification



ISO:TS16949



ISO:9001



ISO:14001

Part Number Description

COB Type

A M 19 W - P26 - A E1 L43 - (XL)

1 2 3 4 5 6 7 8 9

- | | |
|---------------------------------|-----------------------|
| 1 ALLIX® | 6 CRI ≥ 90 |
| 2 Multi Chips | 7 CCT : 5,000K |
| 3 Package Size : 19×19mm | 8 Lumen |
| 4 Color : White | 9 XENOLED II |
| 5 Power : 26W | |

Top View SMD Type

A T 56 S N W - A E1 A1 - (XL)

1 2 3 4 5 6 7 8 9 10

- | | |
|------------------------------|------------------------|
| 1 ALLIX® | 6 Color : White |
| 2 Top View | 7 CRI ≥ 90 |
| 3 Package Size : 5630 | 8 CCT : 5,000K |
| 4 Slug Type | 9 Lumen |
| 5 Non Zener | 10 XENOLED II |

Leaded Type

A L 05 Z W - A D1 M8 - (XL)

1 2 3 4 5 6 7 8 9

- | | |
|---------------------------------------|-----------------------|
| 1 ALLIX® | 6 CRI ≥ 90 |
| 2 Leaded Type | 7 CCT : 5,700K |
| 3 Package Size(Diameter) : 5mm | 8 Lumen |
| 4 Zener | 9 XENOLED II |
| 5 Color : White | |

Part Number Description

Module Type

A L M 30 (15) W 56 S - P10 - A 30 L19

1 2 3 4 5 6 7 8 9 10 11 12

- | | |
|------------------------|------------------------|
| 1 ALLIX® | 7 Size : 5630 |
| 2 Linear Shape | 8 Slug type |
| 3 Module | 9 Power(W) |
| 4 Length(mm) | 10 CRI ≥ 90 |
| 5 Width(mm) | 11 CCT : 3,000K |
| 6 Color : White | 12 Lumen |

A R M 100 W C 8 - P50 - B 27 L49

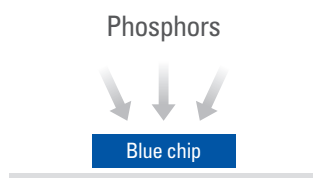
1 2 3 4 5 6 7 8 9 10 11

- | | |
|------------------------|------------------------|
| 1 ALLIX® | 7 COB Power(W) |
| 2 Round Shape | 8 Power(W) |
| 3 Module | 9 CRI ≥ 80 |
| 4 Diameter(mm) | 10 CCT : 2,700K |
| 5 Color : White | 11 Lumen |
| 6 COB Type | |

XENOLED® Technology

XENOLED® I Series

HOW TO MAKE ?

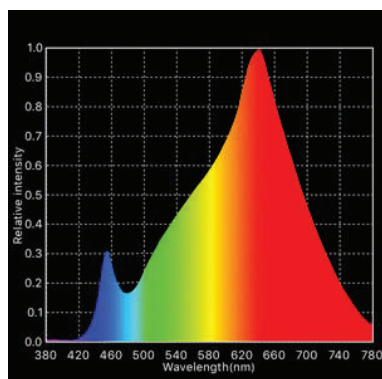


**The Most
Vivid Colors**

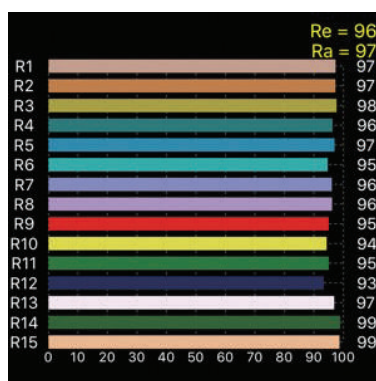
XENOLED® I series, ALLIX's high color quality product brand, are made with blue chips and the multiple phosphors to represent the object colors as close to the ones under the natural sunlight. ALLIX's XENOLED® I series realize high CRI up to 98 and high Rf values up to 96.

Warm White (2700K)

Spectrum

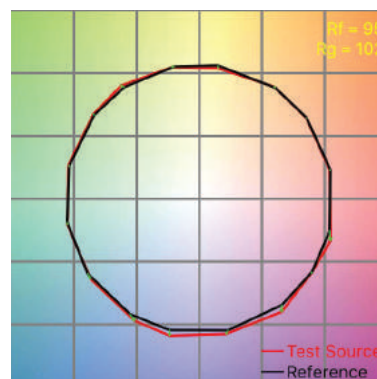


CRI



Ra=97, R9=95,
R12=93, R13=97

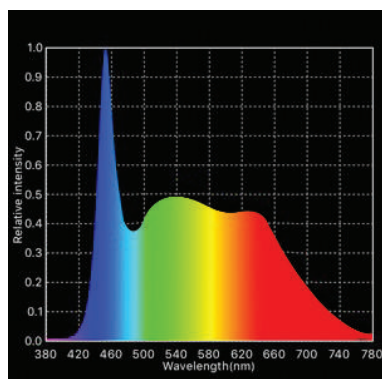
TM-30-15



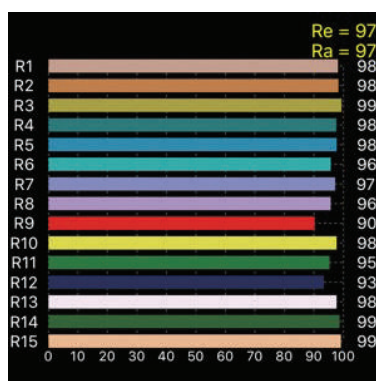
Rf=95,
Rg=102

Cool White (6500K)

Spectrum

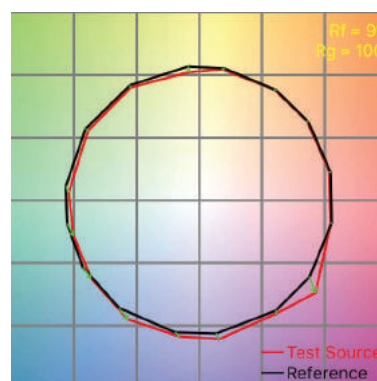


CRI



Ra=97, R9=90,
R12=93, R13=98

TM-30-15

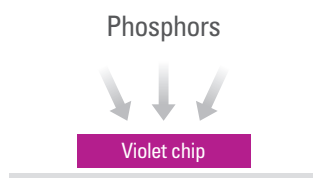


Rf=91,
Rg=101

XENOLED® Technology

XENOLED® II Series

HOW TO MAKE ?

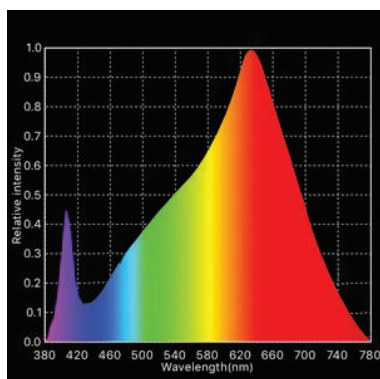


**The Most
Accurate Colors**

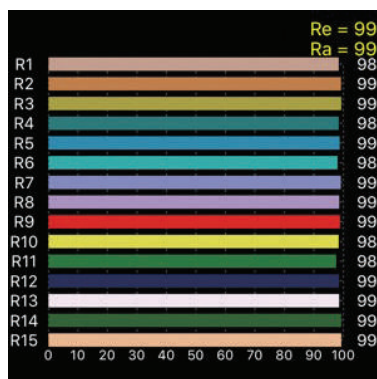
XENOLED® II series, ALLIX's superior color quality product brand, are made with violet chips and the multiple phosphors. They represent the object colors as close to the ones under the natural sunlight and reduce blue hazard lights. ALLIX's XENOLED® II series realize the highest CRI up to 99 and high Rf values up to 98.

Warm White (3000K)

Spectrum

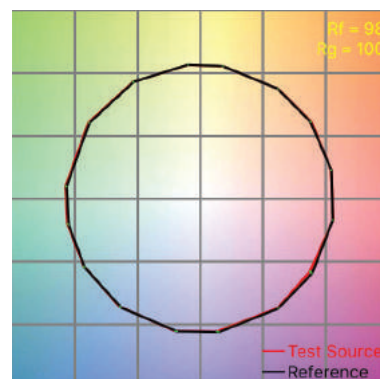


CRI



Ra=99, R9=99,
R12=99, R13=99

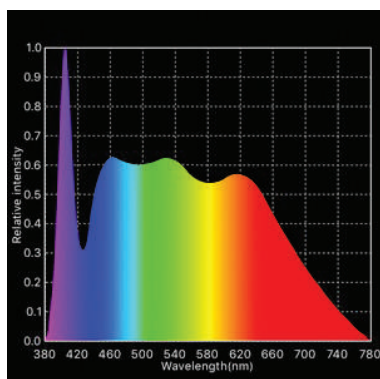
TM-30-15



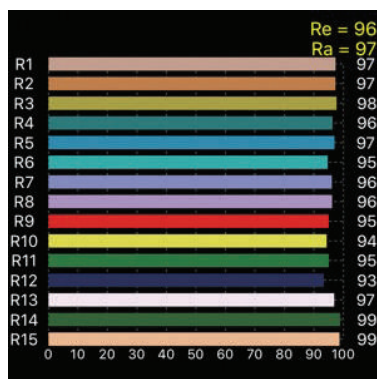
Rf=98,
Rg=100

Cool White (5000K)

Spectrum

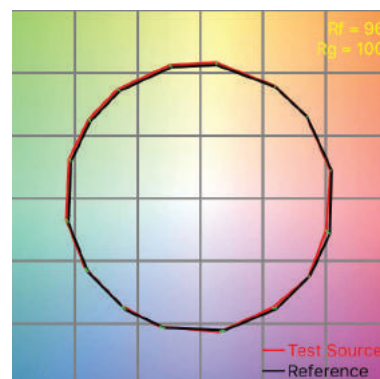


CRI



Ra=97, R9=95,
R12=93, R13=97

TM-30-15



Rf=96,
Rg=100

XENOLED® Technology

XENOLED® I

Application

- Premium Retail Shop Lighting
- Cosmetic Shop Lighting
- Power Room Lighting
- Beauty Salon Lighting
- Hospitality Lighting
- Wedding Hall Lighting
- Broadcasting Lighting
- Photographic Lighting

- Available in all types and all package sizes

XENOLED® II

Application

- Museum Lighting
- Art Gallery Lighting
- Medical Lighting
- Surgical Lighting
- Stereomicroscopes Lighting
- Jewelry Lighting
- Color Inspection Lighting

- Available in all types and all package sizes

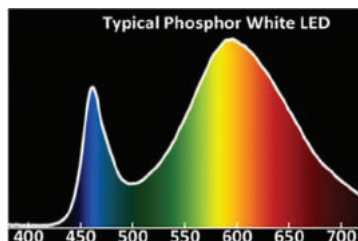
High Technology of XENOLED® II

With XENOLED® II, various kinds of spectra can be expressed.

Innovation

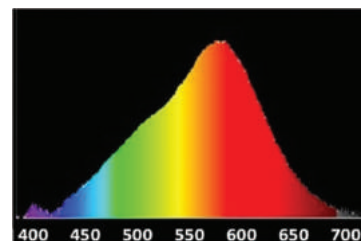
ALLIX XENOLED® II has a great SPD with reduced peaks in blue areas and no emission in IR areas.

Standard White LED



► Blue Spike & Bad SPD

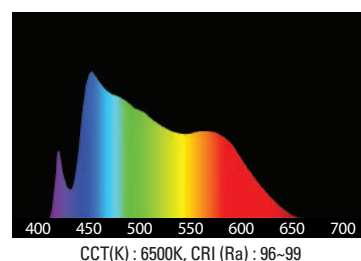
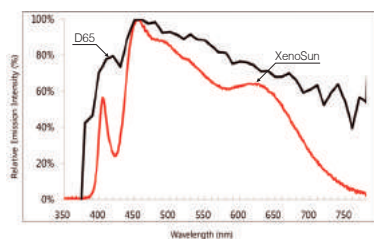
Innovation



► No Spike & Great SPD by ALLIX® XENOLED® II

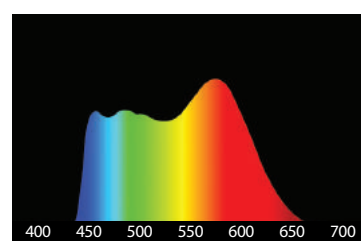
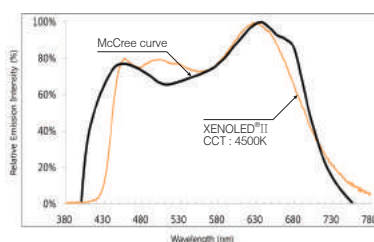
XenoSun™

ALLIX XenoSun™ expresses spectrum similar to sun. For example, CIE D65 illuminant spectrum which represents average daylight can be actualized.



Special Spectrum

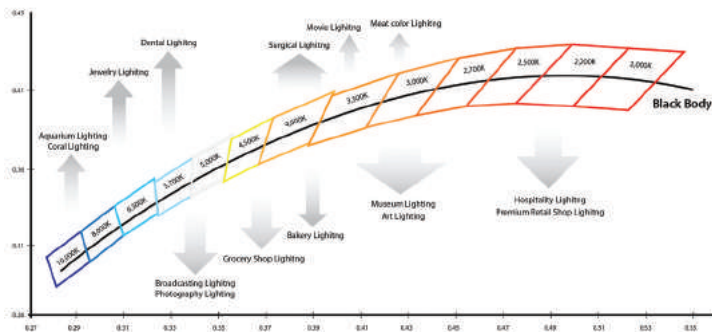
ALLIX XENOLED® II expresses McCree curve which is the evidence which shows green spectrum(500-600nm) is nearly as effective as blue(400-500nm) and red light(600-700nm) for the creation of a photosynthetic.



XENOLED® Technology

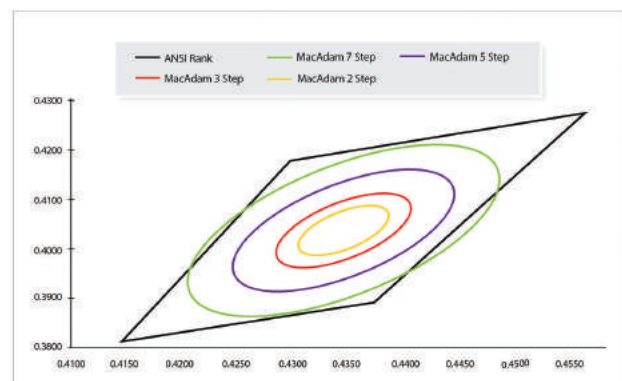
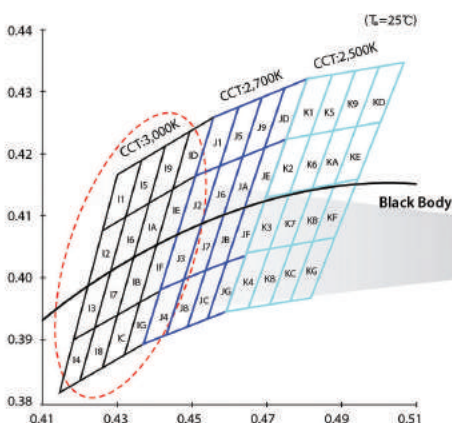
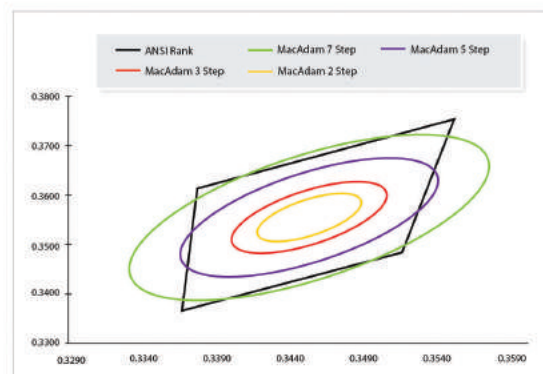
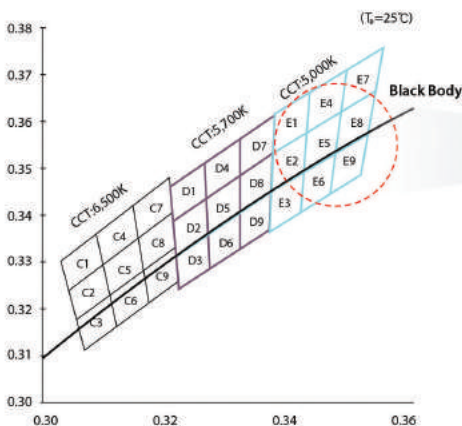
CCT

ALLIX® XENOLED® Series provides a wide range of color temperature from 2,000K to 10,000K. Each color temperature is used in different application areas.



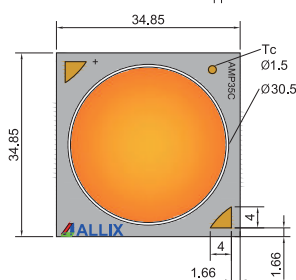
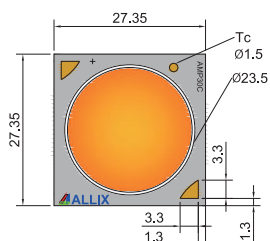
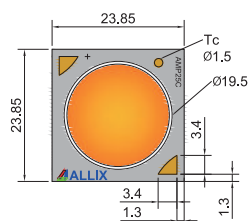
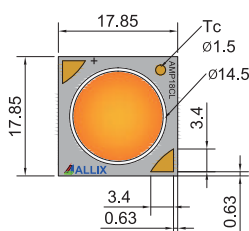
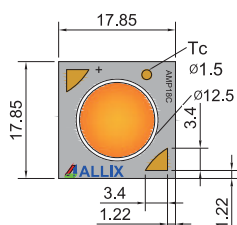
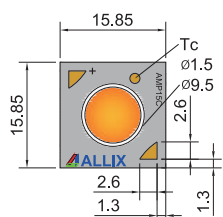
COLOR RANK

ALLIX® XENOLED® Series assures the uniformity of colors. Sometimes you may find the lights showing colors differently even at the same CCT. To avoid this phenomenon, you can design your lighting at narrower color ranks to 2-step MacAdam ellipse (even to 1-step MacAdam ellipse is available).



Technical drawing of a square plate with the following dimensions and features:

- Overall dimensions: 13.35 x 13.35.
- Central circular feature: $\varnothing 6.5$.
- Small circular feature: $\varnothing 1.5$.
- Distance from top edge to center of small circle: 2.6.
- Distance from right edge to center of small circle: 2.6.
- Distance from bottom edge to center of small circle: 1.22.
- Distance from left edge to center of small circle: 1.22.
- Material: Tc.
- Logo: ALLIX.



► AMP13C Series : 4W~8W Available

► **AMP15C Series : 7W~12W Available**

► AMP18C Series : 16W~20W Available

▶ AMP18CL Series : 25W~30W Available

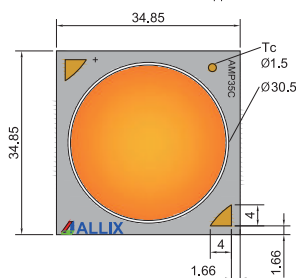
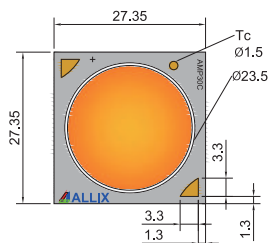
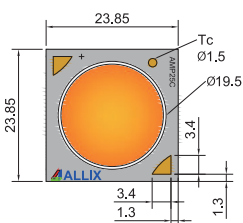
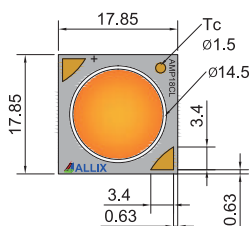
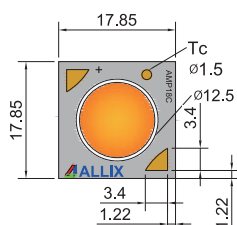
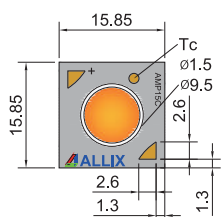
► AMP25C Series : 25W~40W Available

▶ AMP30C Series : 50W~70W Available

▶ AMP35C Series : 80W~90W Available

Technical drawing of a square plate with the following dimensions and features:

- Overall dimensions: 13.35 x 13.35.
- Central circular feature: $\varnothing 6.5$.
- Small circular feature: $\varnothing 1.5$.
- Distance from top edge to center of small circle: 2.6.
- Distance from right edge to center of small circle: 2.6.
- Distance from bottom edge to center of small circle: 1.22.
- Distance from left edge to center of small circle: 1.22.
- Material: Tc.
- Logo: ALLIX.



► AMP13C Series : 4W~8W Available

▶ AMP15C Series : 7W~12W Available

► AMP18C Series : 16W~20W Available

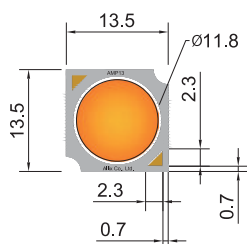
▶ AMP18CL Series : 20W~30W Available

► AMP25C Series : 25W~40W Available

▶ AMP30C Series : 50W~70W Available

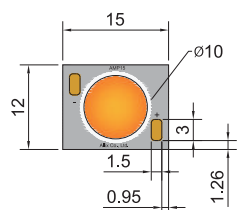
► AMP35C Series : 80W~90W Available

XENOLED® I Series / COB Type B



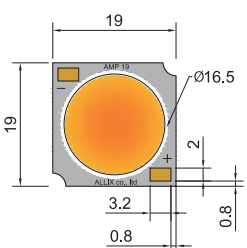
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
1	AMP13	AM13W-P6-A	13.5 × 13.5 × 1.5T	6	180	33~37	2,000~10,000	typ.97	480~720	80~120	10.8

► AMP13C Series : 4W~8W Available



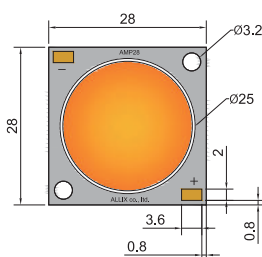
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
2	AMP15	AM15W-P10-A	15 × 12 × 1.5T	10	270	33~37	2,000~10,000	typ.97	800~1,200	80~120	10.8

► AMP15 Series : 5W~10W Available



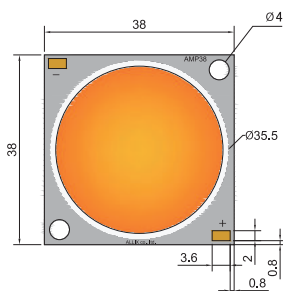
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
3	AMP19	AM19W-P26-A	19 × 19 × 1.5T	26	720	33~37	2,000~10,000	typ.97	2,080~3,120	80~120	15.5

► AMP19 Series : 10W~26W Available



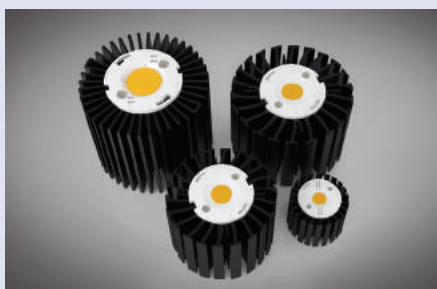
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
4	AMP28	AM28W-P39-A	28 × 28 × 1.5T	39	1,080	33~37	2,000~10,000	typ.97	3,100~4,700	80~120	23

► AMP28 Series : 30W~60W Available



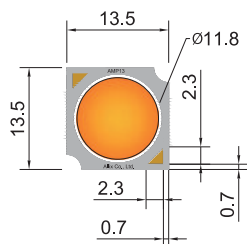
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
5	AMP38	AM38W-P100-A	38 × 38 × 1.5T	100	1,800	53~57	2,000~10,000	typ.97	8,000~11,000	80~110	33.8

► AMP38 Series : 50W~100W Available



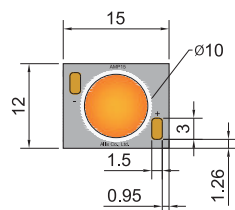
► All COBs are available with appropriate heatsinks and holders.

XENOLED® II Series / COB Type B



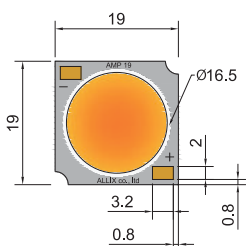
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
1	AMP13	AM13W-P6-A-XL	13.5 × 13.5 × 1.5T	6	180	34~40	2,000~10,000	typ.97	360~660	60~110	10.8

► AMP13C Series : 4W~8W Available



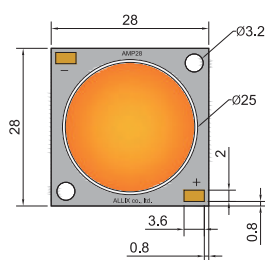
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
2	AMP15	AM15W-P10-A-XL	15 × 12 × 1.5T	10	270	34~40	2,000~10,000	typ.97	600~1,100	60~110	10.8

► AMP15 Series : 5W~10W Available



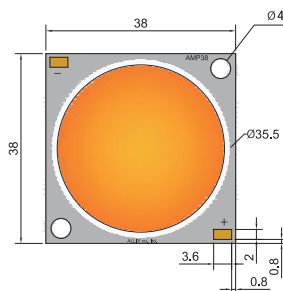
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
3	AMP19	AM19W-P26-A-XL	19 × 19 × 1.5T	26	720	34~40	2,000~10,000	typ.97	1,560~2,860	60~110	15.5

► AMP19 Series : 10W~26W Available



No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
4	AMP28	AM28W-P58-A-XL	28 × 28 × 1.5T	58	1,050	54~60	2,000~10,000	typ.97	3,480~6,380	60~110	23

► AMP28 Series : 30W~60W Available



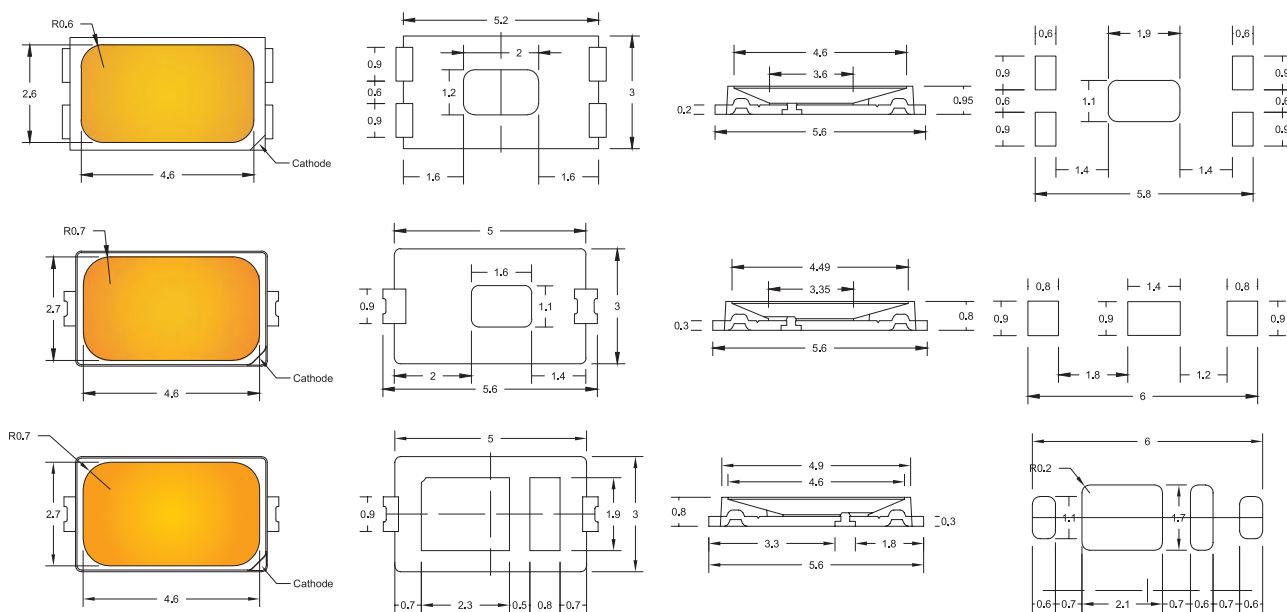
No.	Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
5	AMP38	AM38W-P100-A-XL	38 × 38 × 1.5T	100	1,800	54~60	2,000~10,000	typ.97	6,000~10,000	60~100	33.8

► AMP38 Series : 50W~100W Available

XENOLED® I Series / Top View 5630 · 5450

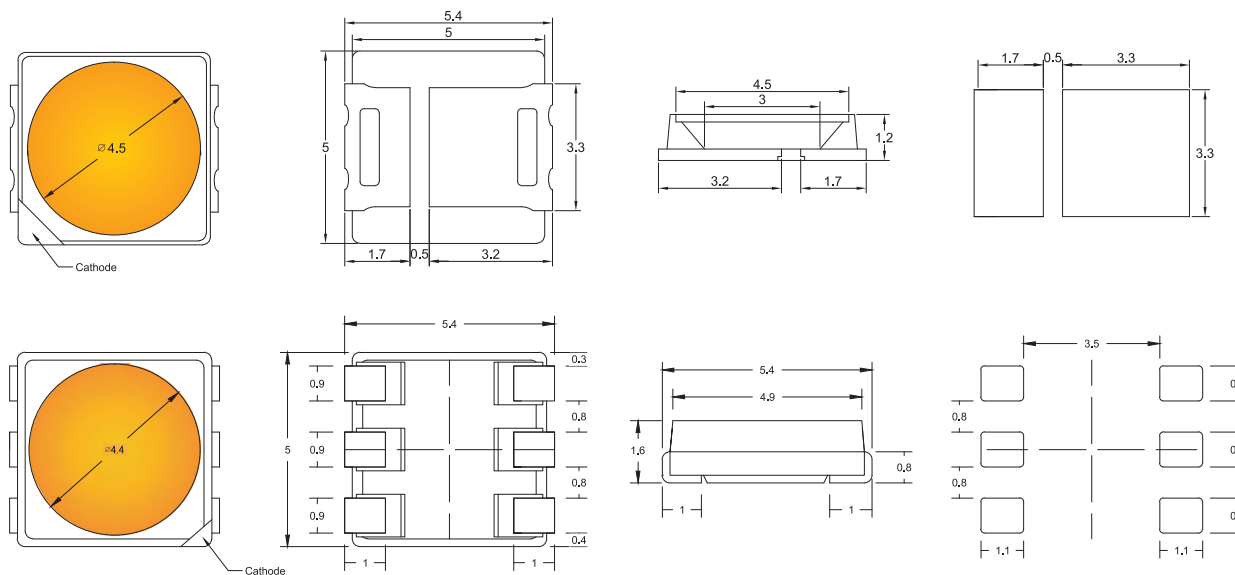
5630 LM80 RoHS

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT56SNW-A	5.6×3.0×0.9T	0.2	65	2.8-3.3	2,000-10,000	typ.97	18-26	90-130
2	AT56SNW-A	5.6×3.0×0.9T	0.3	100	2.8-3.3	2,000-10,000	typ.97	27-39	90-130
3	AT56SNW-A	5.6×3.0×0.9T	0.5	150	2.8-3.3	2,000-10,000	typ.97	45-65	90-130



5450  **RoHS**

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT54BNW-A	5.4×5.0×1.6T	0.2	60	2.8-3.3	2,000-10,000	typ.97	17-25	90-130
2	AT54SNW-A	5.4×5.0×1.0T	0.3	100	2.8-3.3	2,000-10,000	typ.97	27-39	90-130
3	AT54SNW-A	5.4×5.0×1.0T	1.0	350	2.8-3.3	2,000-10,000	typ.97	60-100	60-100

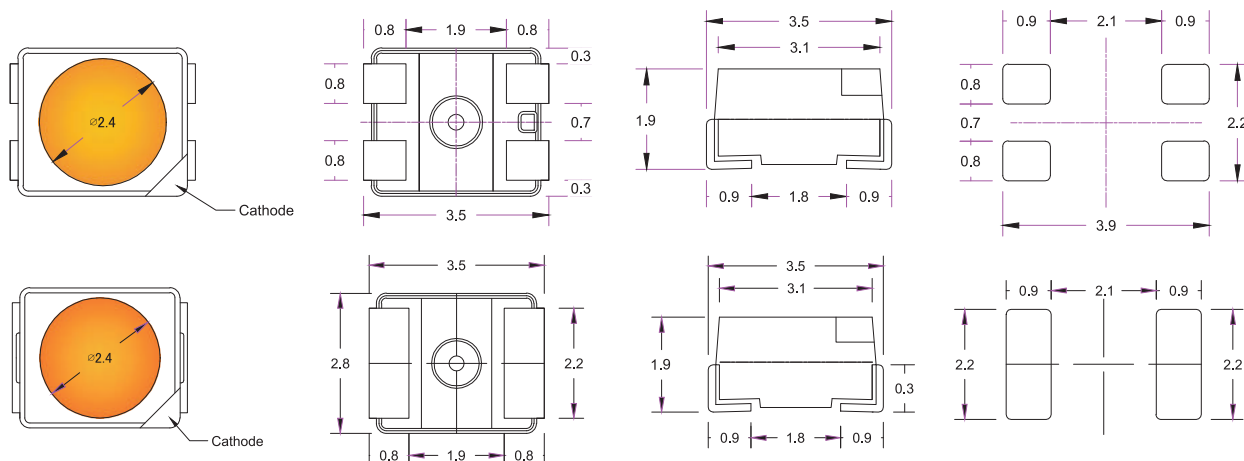


XENOLED® I Series / Top View 3528 · 3014 · 2835

3528

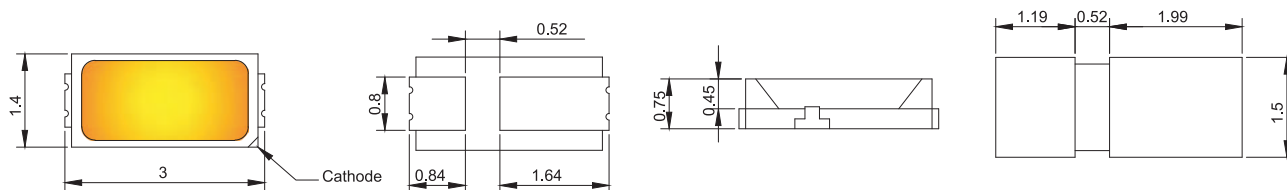


No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT35BNW-A	3.5 × 2.8 × 1.9T	0.06	20	2.8~3.3	2,000~10,000	typ.97	5~7	90~130
2	AT35BNW-A	3.5 × 2.8 × 1.9T	0.2	60	2.8~3.3	2,000~10,000	typ.97	18~26	90~130



3014

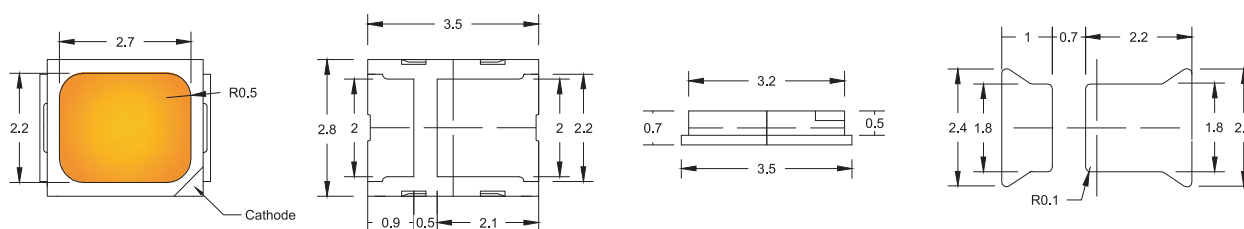
No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT14SNW-A	3.0 × 1.4 × 0.7T	0.2	65	2.8~3.3	2,000~10,000	typ.97	18~26	90~130
2	AT14SNW-A	3.0 × 1.4 × 0.7T	0.3	100	2.8~3.3	2,000~10,000	typ.97	27~39	90~130



2835



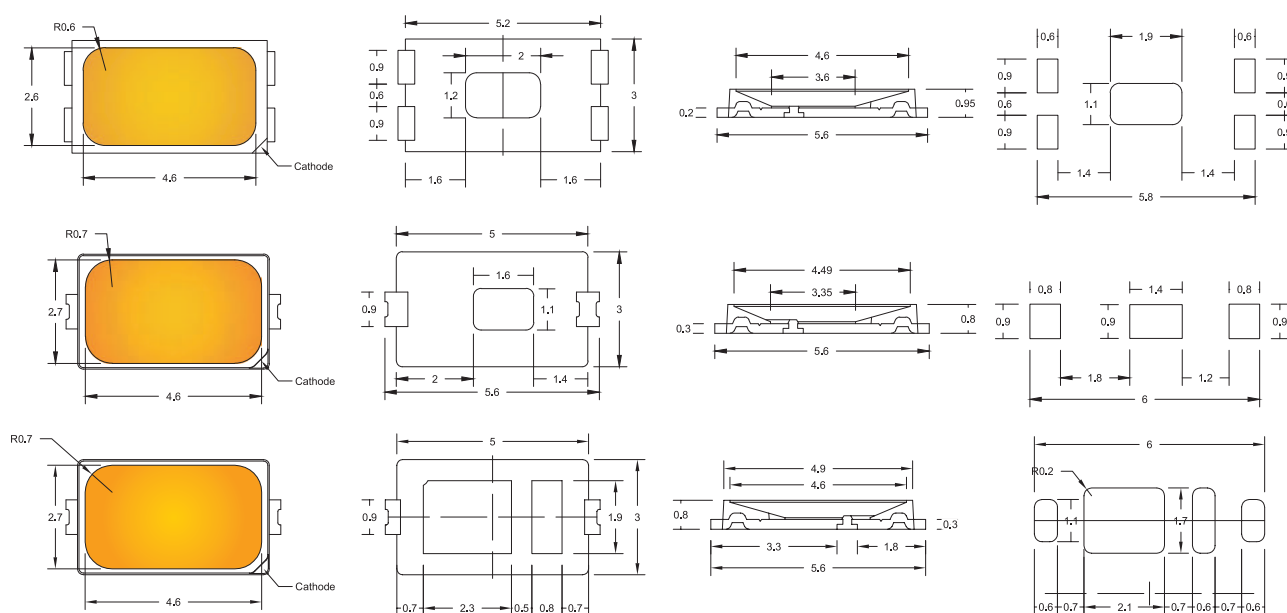
No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT28SNW-A	2.8 × 3.5 × 0.7T	0.2	65	2.8~3.3	2,000~10,000	typ.97	18~26	90~130
2	AT28SNW-A	2.8 × 3.5 × 0.7T	0.3	100	2.8~3.3	2,000~10,000	typ.97	27~39	90~130
3	AT28SNW-A	2.8 × 3.5 × 0.7T	0.5	150	2.8~3.3	2,000~10,000	typ.97	45~65	90~130



XENOLED® II Series / Top View 5630 · 5450

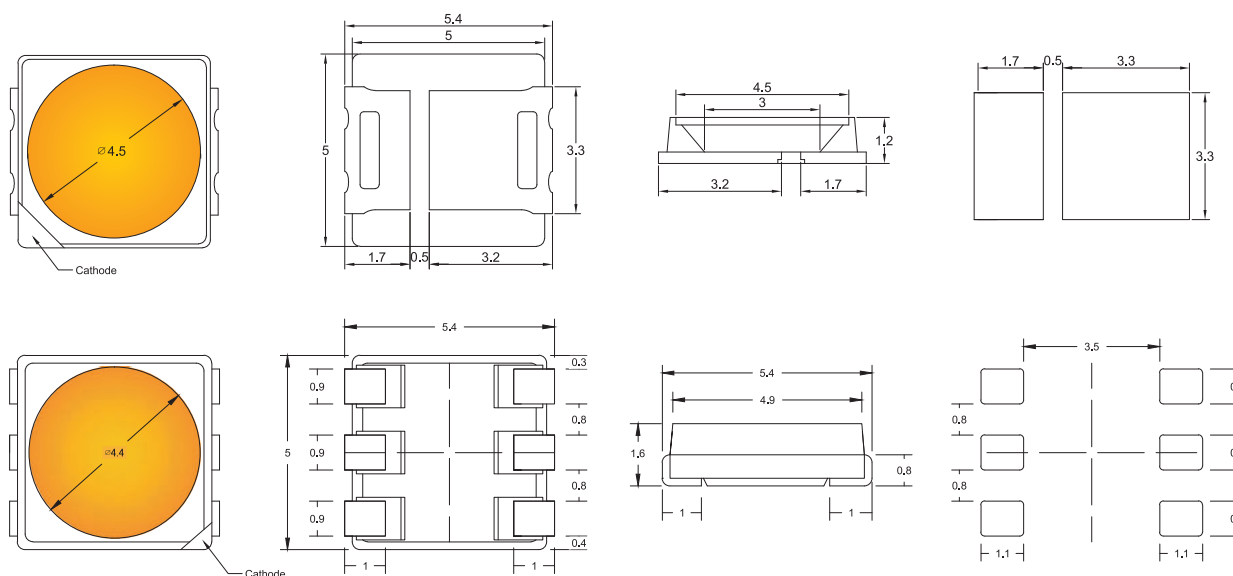
5630

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT56SNW-A-XL	5.6 × 3.0 × 0.9T	0.2	65	2.9~3.8	2,000~10,000	typ.97	12~22	60~110
2	AT56SNW-A-XL	5.6 × 3.0 × 0.9T	0.3	100	2.9~3.8	2,000~10,000	typ.97	18~33	60~110
3	AT56SNW-A-XL	5.6 × 3.0 × 0.9T	0.5	150	2.9~3.8	2,000~10,000	typ.97	30~55	60~110



5450

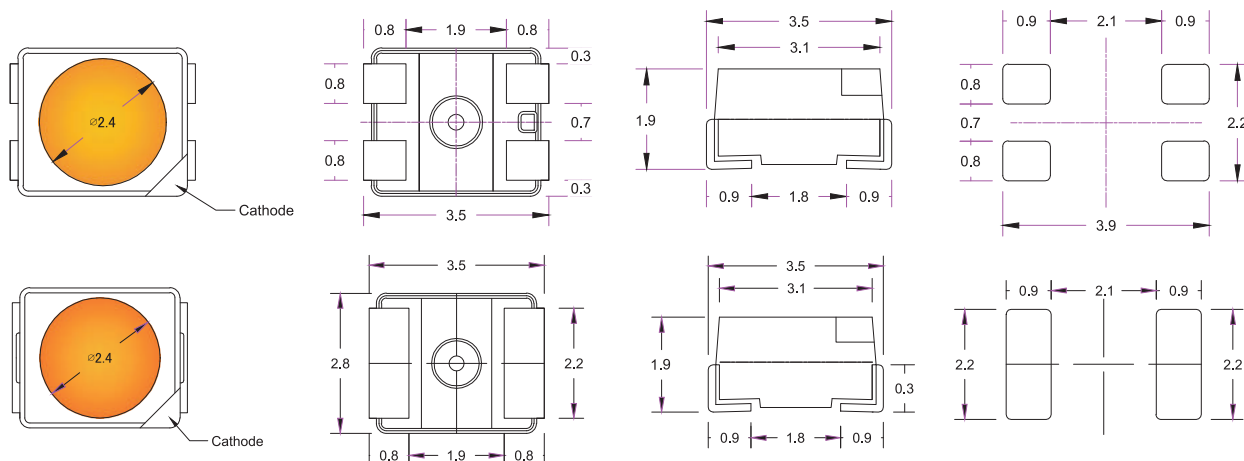
No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT54BNW-A-XL	5.4 × 5.0 × 1.6T	0.2	60	2.9~3.8	2,000~10,000	typ.97	11~21	60~110
2	AT54SNW-A-XL	5.4 × 5.0 × 1.0T	0.3	100	2.9~3.8	2,000~10,000	typ.97	18~33	60~110



XENOLED® II Series / Top View 3528 · 3014 · 2835

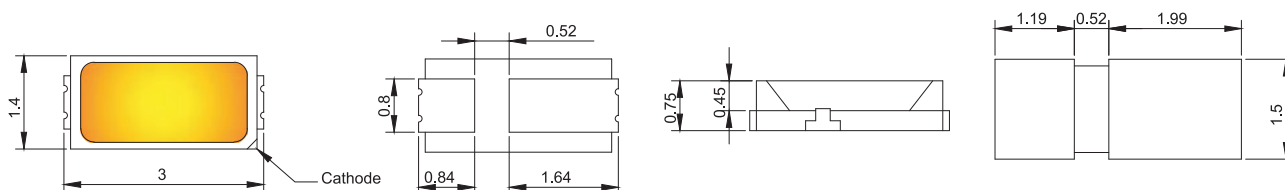
3528

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT35BNW-A-XL	3.5 × 2.8 × 1.9T	0.06	20	2.9~3.8	2,000~10,000	typ.97	3~6	60~110
2	AT35BNW-A-XL	3.5 × 2.8 × 1.9T	0.2	60	2.9~3.8	2,000~10,000	typ.97	12~22	60~110



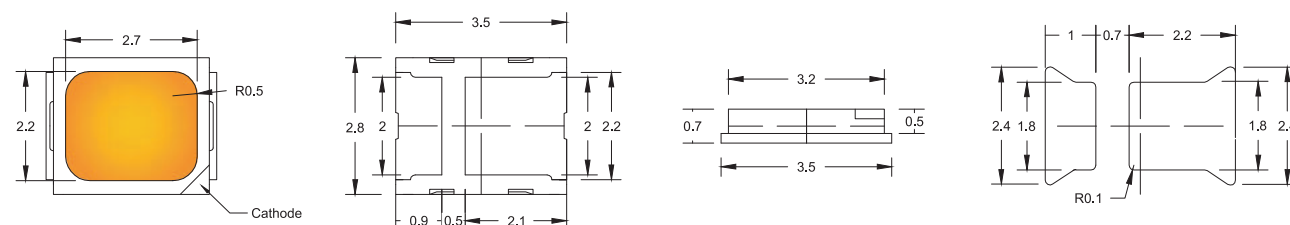
3014

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
3	AT14SNW-A-XL	3.0 × 1.4 × 0.7T	0.2	65	2.9~3.8	2,000~10,000	typ.97	12~22	60~110
4	AT14SNW-A-XL	3.0 × 1.4 × 0.7T	0.3	100	2.9~3.8	2,000~10,000	typ.97	18~33	60~110



2835

No.	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
5	AT28SNW-A-XL	2.8 × 3.5 × 0.7T	0.2	65	2.9~3.8	2,000~10,000	typ.97	12~22	60~110
6	AT28SNW-A-XL	2.8 × 3.5 × 0.7T	0.3	100	2.9~3.8	2,000~10,000	typ.97	18~33	60~110



AM Series / COB Type A · Type B

AM Series / COB Type A

No.	Series	Device	Size(L×W×H)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
1	AMP13C	AM13CW-P4-B	13.35 × 13.35 × 1.5T	4 (4W-8W Available)	100	33-37	2,000-10,000	min.80	440-680	110-170	6
2	AMP15C	AM15CW-P7-B	15.9 × 15.9 × 1.5T	7 (7W-12W Available)	200	33-37	2,000-10,000	min.80	770-1,190	110-170	9
3	AMP18C	AM18CW-P16-B	17.9 × 17.9 × 1.5T	16 (16W-20W Available)	450	33-37	2,000-10,000	min.80	1,760-2,720	110-170	12
4	AMP18CL	AM18CLW-P26-B	25.4 × 25.4 × 1.5T	26 (20W-30W Available)	800	33-37	2,000-10,000	min.80	2,680-4,420	110-170	14
5	AMP25C	AM25CW-P40-B	22.85 × 22.85 × 1.5T	40 (25W-40W Available)	1,050	33-37	2,000-10,000	min.80	4,400-6,800	110-170	19
6	AMP30C	AM30CW-P50-B	27.4 × 27.4 × 1.5T	50 (50W-70W Available)	1,400	33-37	2,000-10,000	min.80	5,500-8,000	110-160	23
7	AMP35C	AM35CW-P80-B	34.9 × 34.9 × 1.5T	80 (80W-90W Available)	2,250	33-37	2,000-10,000	min.80	8,000-12,000	100-150	30

AM Series / COB Type B

No.	Series	Device	Size(L×W×H)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
1	AMP13	AM13W-P6-B	13.5 × 13.5 × 1.5T	6 (4W-8W Available)	180	33-37	2,000-10,000	min.80	660-1,020	110-170	10.8
2	AMP15	AM15W-P10-B	15 × 12 × 1.5T	10 (5W-10W Available)	270	33-37	2,000-10,000	min.80	1,100-1,700	110-170	10.8
3	AMP19	AM19W-P26-B	19 × 19 × 1.5T	26 (10W-26W Available)	720	33-37	2,000-10,000	min.80	2,860-4,420	110-170	15.5
4	AMP28	AM28W-P58-B	28 × 28 × 1.5T	58 (30W-60W Available)	1,050	53-57	2,000-10,000	min.80	6,380-9,280	110-160	23
5	AMP38	AM38W-P100-B	38 × 38 × 1.5T	100 (50W-100W Available)	1,800	53-57	2,000-10,000	min.80	10,000-15,000	100-150	33.8

AM Series / COB linear bar

No.	Series	Device	Size(L×W×H)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
1	COB	COB linear bar	192 × 10 × 1.0T	3	90	35-40	2,000-10,000	min.80	270-450	90-150	192 x 7



► COB linear bar is made with a series of raw chips densely mounted to reduce multiple shadows.

AM Series / High Power COB

► We can customize high power COBs up to 300W.

AT Series / Top View 5630 · 3014

AT Series / Top View 5630 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT56SNW-B	5.6 × 3.0 × 0.9T	White	0.2	65	2.8-3.3	2,000K-10,000K	min.80	24-42	120-200
2	AT56SNW-B	5.6 × 3.0 × 0.9T	White	0.3	100	2.8-3.3	2,000K-10,000K	min.80	33-60	120-200

AT Series / Top View 5630 Non-white

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity(mcd)	Dominant Wavelength(nm)
1	AT56SNR	5.6 × 3.0 × 0.9T	Red	0.3	150	1.8-2.6	3,000-6,000	625
2	AT56SNG	5.6 × 3.0 × 0.9T	Green	0.3	120	2.8-3.4	5,000-8,000	525
3	AT56SNB	5.6 × 3.0 × 0.9T	Blue	0.3	120	2.8-3.3	1,000-2,500	460
4	AT56SNY	5.6 × 3.0 × 0.9T	Yellow	0.3	150	1.8-2.6	3,000-7,000	590

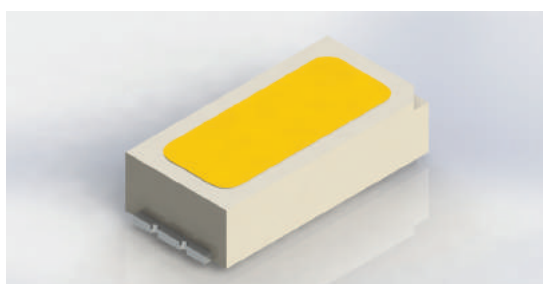


AT Series / Top View 3014 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT14SNW-B	3.0 × 1.4 × 0.7T	White	0.2	60	2.8-3.3	2,000K-10,000K	min.80	5-12	70-170
2	AT14SNW-B	3.0 × 1.4 × 0.7T	White	0.3	100	2.8-3.3	2,000K-10,000K	min.80	15-35	70-170

AT Series / Top View 3014 Non-white

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity(mcd)	Dominant Wavelength(nm)
1	AT14SNR	3.0 × 1.4 × 0.7T	Red	0.04	20	1.8-2.6	300-700	625
2	AT14SNG	3.0 × 1.4 × 0.7T	Green	0.06	20	2.8-3.4	500-1,100	525
3	AT14SNB	3.0 × 1.4 × 0.7T	Blue	0.06	20	2.8-3.3	100-400	460
4	AT14SNY	3.0 × 1.4 × 0.7T	Yellow	0.04	20	1.8-2.6	400-800	590



AT Series / Top View 5450

AT Series / Top View 5450 White

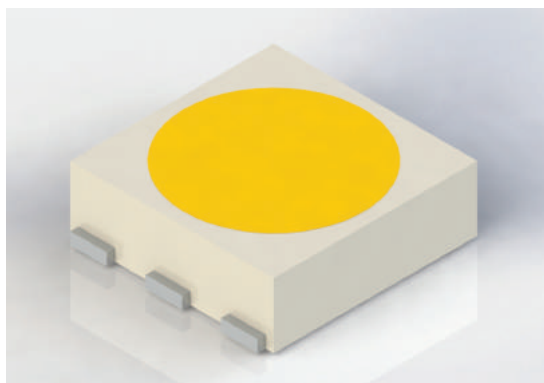
No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT54BNW-B	5.4 × 5.0 × 1.6T	White	0.2	60	2.8~3.3	2,000K~10,000K	min.80	16~36	80~180
2	AT54SNW-B	5.4 × 5.0 × 1.0T	White	0.2	65	2.8~3.3	2,000K~10,000K	min.80	18~38	90~190
3	AT54SNW-B	5.4 × 5.0 × 1.0T	White	0.3	100	2.8~3.3	2,000K~10,000K	min.80	26~58	90~190
4	AT54SNW-B	5.4 × 5.0 × 1.0T	White	1.0	350	2.8~3.3	2,000K~10,000K	min.80	70~140	70~140

AT Series / Top View 5450 Non-white

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity(mcd)	Dominant Wavelength(nm)
1	AT54BNF	5.4 × 5.0 × 1.6T	Full color (R,G,B)	0.04	20	1.8~2.6	600~1,500	625
				0.06	20	2.8~3.4	900~2,200	525
				0.06	20	2.8~3.3	250~800	460
2	AT54BNR	5.4 × 5.0 × 1.6T	Red	0.12	60	1.8~2.6	1,000~1,600	625
3	AT54BNG	5.4 × 5.0 × 1.6T	Green	0.19	60	2.8~3.4	3,000~4,000	525
4	AT54BNB	5.4 × 5.0 × 1.6T	Blue	0.19	60	2.8~3.3	600~1,200	460
5	AT54BNY	5.4 × 5.0 × 1.6T	Yellow	0.12	60	1.8~2.6	1,000~2,000	590

AT Series / Top View 5450 IR · UV

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Peak Wavelength(nm)
1	AT54BNI	5.4 × 5.0 × 1.6T	IR(Infrared)	0.2	150	1.4~1.8	6~65	750~950
2	AT54BNU	5.4 × 5.0 × 1.6T	UV(Ultra Violet)	0.2	60	2.9~3.8	10~60	380~420



4 IN 1 LED / Top View 5050

You can have 4 different colors in 1 package.

- Use this special LED for your color tunable lighting.

4 IN 1 LED / Top View 5050 RGBW

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Peak Wavelength(nm)	CCT(K)	CRI(Ra)	Luminous Intensity(mcd)
1	AT54BNF-A(4C)	5.0 × 5.0 × 1.6T	Red	0.06	20	2.8-3.3	620-630	-	-	1,000-1,500
2			Green	0.06	20	2.8-3.3	525-560	-	-	2,500-3,500
3			Blue	0.06	20	2.9-3.8	450-560	-	-	800-1,000
4			White	0.06	20	2.8-3.3	-	2,000-10,000	80-98	18-26lm



4 IN 1 LED / Top View 5050 WWWW

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy (lm/W)
1	AT54BNF-A(4C)	5.4 × 5.0 × 1.6T	White	0.06	20	2.8-3.3	2,000-10,000	80-98	18-26	90-130
2			White	0.06	20	2.8-3.3	2,000-10,000	80-98	18-26	90-130
3			White	0.06	20	2.8-3.3	2,000-10,000	80-98	18-26	90-130
4			White	0.06	20	2.8-3.3	2,000-10,000	80-98	18-26	90-130



AT Series / Top View 3528 · 2835

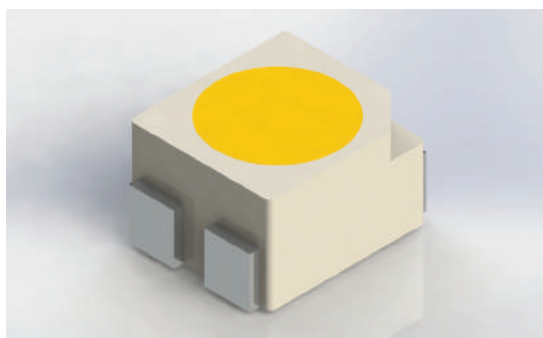
AT Series / Top View 3528 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT35BNW-B	3.5 × 2.8 × 1.9T	White	0.06	20	2.8~3.3	2,000~10,000	min. 80	5~12	80~170
2	AT35BNW-B	3.5 × 2.8 × 1.9T	White	0.12	40	2.8~3.3	2,000~10,000	min. 80	10~22	80~170

AT Series / Top View 3528 Non-white

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity (mcd)	Dominant Wavelength (nm)
1	AT35BNF	3.5 × 2.8 × 1.9T	Full color (RGB)	Red	0.04	20	1.8~2.6	500~1,000
			Green	0.06	20	2.8~3.4	800~1,600	525
			Blue	0.06	20	2.8~3.3	200~600	460
2	AT35BNR	3.5 × 2.8 × 1.9T	Red	0.04~0.12	20~60	1.8~2.6	600~2,500	625
3	AT35BNG	3.5 × 2.8 × 1.9T	Green	0.06~0.2	20~60	2.8~3.4	800~3,500	525
4	AT35BNB	3.5 × 2.8 × 1.9T	Blue	0.06~0.2	20~60	2.8~3.3	300~1,500	460
5	AT35BNY	3.5 × 2.8 × 1.9T	Yellow	0.04~0.12	20~60	1.8~2.6	700~2,800	590

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Dominant Wavelength (nm)
1	AT35BNI	3.5 × 2.8 × 1.9T	IR(Infrared)	0.08	50	1.4~1.8	5~60	750~950

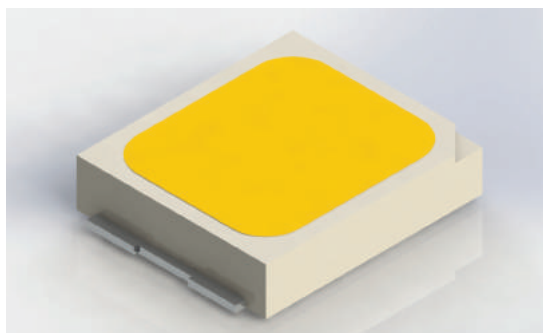


AT Series / Top View 2835 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT28SNW-B	2.8 × 3.5 × 0.7T	white	0.2	65	2.8~3.3	2,000~10,000	min. 80	20~40	110~180
2	AT28SNW-B	2.8 × 3.5 × 0.7T	white	0.3	100	2.8~3.3	2,000~10,000	min. 80	30~55	110~180

AT Series / Top View 2835 Non-white

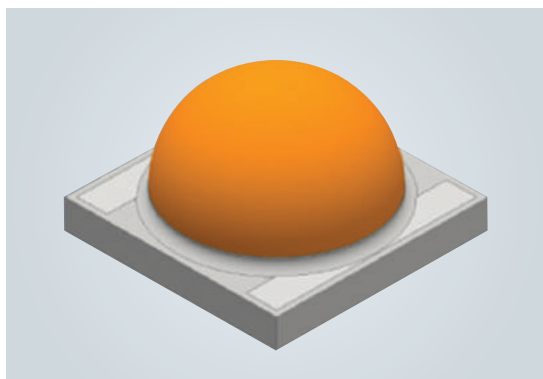
No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity (mcd)	Dominant Wavelength (nm)
1	AT28SNR	2.8 × 3.5 × 0.7T	Red	0.3	150	1.8~2.6	3,000~6,000	625
2	AT28SNG	2.8 × 3.5 × 0.7T	Green	0.3	120	2.8~3.4	5,000~8,000	525
3	AT28SNB	2.8 × 3.5 × 0.7T	Blue	0.3	120	2.8~3.3	1,000~2,500	460
4	AT28SNY	2.8 × 3.5 × 0.7T	Yellow	0.3	150	1.8~2.6	3,000~7,000	590



High Power Package / Top View 3535 · 1818

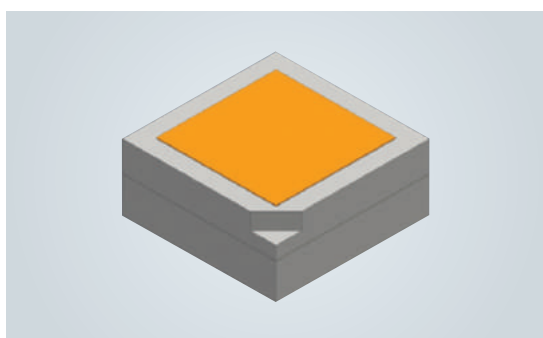
High Power Package / Top View 3535 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT35SNW-C	3.5 × 3.5 × 2.1T	White	1	350	2.8~3.3	2,700~6,500	min. 70	80~140	80~140



High Power Package / Top View 1818 White

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)
1	AT18SNW-C	1.8 × 1.8 × 0.8T	White	2.1	700	2.8~3.3	2,700~6,500	min. 70	168~295	80~140



AL Series / Top View Ø3 · Ø5

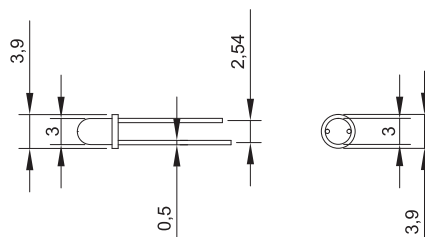
AL Series / Ø3 Leaded Type White

No.	Device	Size(mm)	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous intensity(mcd)
1	AL03NW-B	Ø3	±15	White	0.06	20	2.8-3.3	2,000K~10,000K	min. 80	4,000~11,000
2	AL03NW-B	Ø3	±25	White	0.06	20	2.8-3.3	2,000K~10,000K	min. 80	3,000~10,000

AL Series / Ø3 Leaded Type Non-white

No.	Device	Size	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous intensity (mcd)	Dominant Wavelength(nm)
1	AL03NR	Ø3	±15	Red	0.04	20	1.8-2.6	2,000-5,000	625
2	AL03NG	Ø3	±15	Green	0.06	20	2.8-3.4	2,500-5,500	525
3	AL03NB	Ø3	±15	Blue	0.06	20	2.8-3.3	1,000-2,500	460
4	AL03NY	Ø3	±15	Yellow	0.04	20	1.8-2.6	2,000-5,500	590

No.	Device	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Peak Wavelength(nm)
5	AL03NI	±15	IR(Infrared)	0.1	50	1.6-2.2	30-200	740
6				0.08	50	1.4-1.7	30-200	850
7				0.08	50	1.2-1.6	20-150	940



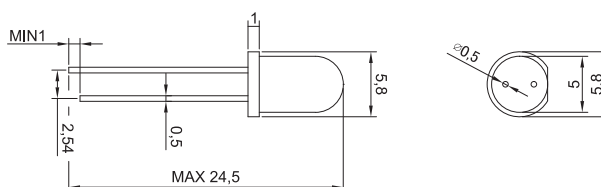
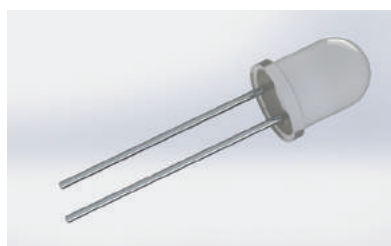
AL Series / Ø5 Leaded Type White

No.	Device	Size(mm)	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous intensity(mcd)
1	AL05NW-B	Ø5	±15	White	0.06	20	2.8-3.3	2,000~10,000	min. 80	5,000~12,000
2	AL05NW-B	Ø5	±25	White	0.06	20	2.8-3.3	2,000~10,000	min. 80	4,000~11,000
3	AL05ZW-B	Ø5	±55	White	0.06	20	2.8-3.3	2,000~10,000	min. 80	500~2,000

AL Series / Ø5 Leaded Type Non-white

No.	Device	Size	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity (mcd)	Dominant Wavelength(nm)
1	AL05NR	Ø5	±15	Red	0.04	20	1.8-2.6	4,000-8,000	625
2	AL05NR		±25		0.04	20	1.8-2.6	1,000-5,000	
3	AL05NG	Ø5	±15	Green	0.06	20	2.8-3.4	4,000-8,000	525
4	AL05NG		±25		0.06	20	2.8-3.4	1,500-6,000	
5	AL05NB	Ø5	±15	Blue	0.06	20	2.8-3.3	1,500-4,500	460
6	AL05NB		±25		0.06	20	2.8-3.3	1,000-4,000	
7	AL05NY	Ø5	±15	Yellow	0.04	20	1.8-2.6	5,000-9,000	590
8	AL05NY		±25		0.04	20	1.8-2.6	1,500-4,500	

No.	Device	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Peak Wavelength(nm)
9	AL05NI	±5	IR(Infrared)	0.1	50	1.6-2.2	100-500	740
10		±15		0.1	50	1.6-2.2	50-400	740
11		±5		0.08	50	1.4-1.7	100-400	850
12		±15		0.08	50	1.4-1.7	50-250	850
13		±5		0.08	50	1.2-1.6	100-450	940
14		±15		0.08	50	1.2-1.6	50-250	940



AL Series / Top View Ø8 · Ø10

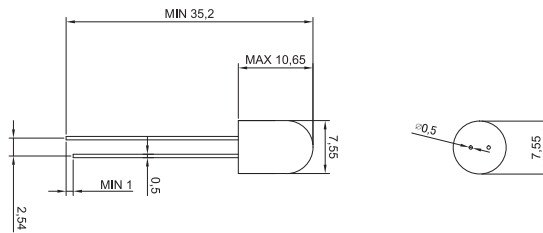
AL Series / Ø8 Ledged Type White

No.	Device	Size(mm)	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous intensity(mcd)	CCT(K)	CRI(Ra)
1	AL08NW-B	Ø8	±15	White	0.06	20	2.8~3.3	6,000~18,000	2,000~10,000	min. 80
2	AL08NW-B	Ø8	±25	White	0.06	20	2.8~3.3	5,000~15,000	2,000~10,000	min. 80

AL Series / Ø8 Ledged Type Non-white

No.	Device	Size	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity (mcd)	Dominant Wavelength(nm)
1	AL08NR	Ø8	±15	Red	0.04	20	1.8~2.6	5,000~12,000	625
2	AL08NG	Ø8	±15	Green	0.06	20	2.8~3.4	5,000~15,000	525
3	AL08NB	Ø8	±15	Blue	0.06	20	2.8~3.3	3,000~10,000	460
4	AL08NY	Ø8	±15	Yellow	0.04	20	1.8~2.6	5,000~12,000	590

No.	Device	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Peak Wavelength(nm)
5	AL08NI	±15	IR(Infrared)	0.1	50	1.6~2.2	70~300	740
6				0.08	50	1.4~1.7	70~300	850
7				0.08	50	1.2~1.6	20~150	940



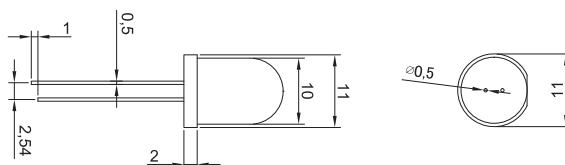
AL Series / Ø10 Ledged Type White

No.	Device	Size(mm)	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity(mcd)	CCT(K)	CRI(Ra)
1	AL10NW-B	Ø10	±15	White	0.06	20	2.8~3.3	8,000~20,000	2,000K~10,000K	min. 80
2	AL10NW-B	Ø10	±25	White	0.06	20	2.8~3.3	6,000~18,000	2,000K~10,000K	min. 80
3	AL10NW-B	Ø10	±15	White	0.5	150	2.8~3.3	55,000~80,000	2,000K~10,000K	min. 80

AL Series / Ø10 Ledged Type Non-white

No.	Device	Size	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Luminous Intensity (mcd)	Dominant Wavelength(nm)
1	AL10NR	Ø10	±15	Red	0.04	20	1.8~2.6	5,000~12,000	625
2	AL10NG	Ø10	±15	Green	0.06	20	2.8~3.4	5,000~15,000	525
3	AL10NB	Ø10	±15	Blue	0.06	20	2.8~3.3	3,000~10,000	460
4	AL10NY	Ø10	±15	Yellow	0.04	20	1.8~2.6	5,000~12,000	590

No.	Device	2θ½(°)	Color	Power(W)	IF(mA)	VF(V)	Ie(mW/sr)	Peak Wavelength(nm)
5	AL10NI	±15	IR(Infrared)	0.1	50	1.6~2.2	70~300	740
6				0.08	50	1.4~1.7	70~300	850
7				0.08	50	1.2~1.6	20~150	940

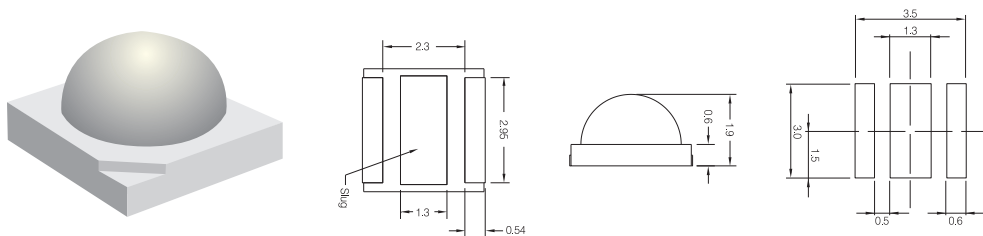


UV Series

UV LED

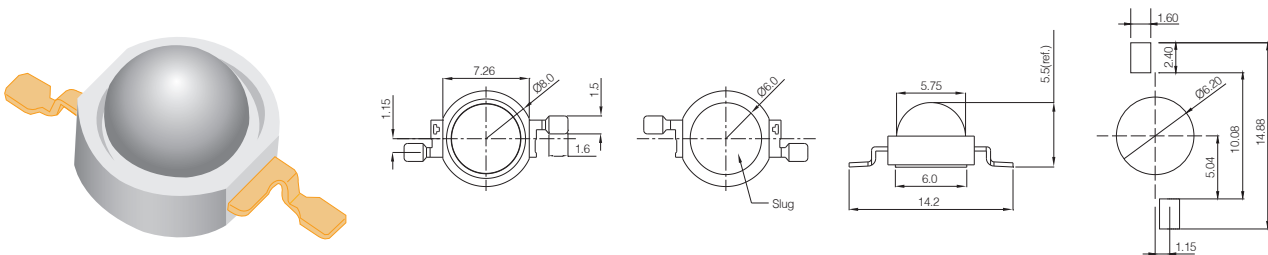
AT Series / Top View 3535 UV

No.	Device	Size(mm)	Color	Power(W) Max.	Test Current (mA)	Vf(V) Typ.	Power (mW)	Peak Wavelength (nm)		Max Current (mA)
								Min.	Max.	
1	AT35SNU	3.45 × 3.44	UV	1	350	3.5	275-515	365	370	350
2		3.45 × 3.44		1	350	3.4	435-755	390	410	350
3		3.45 × 3.44		3	500	3.6	455-685	365	370	700
4		3.45 × 3.44		3	500	3.5	755-1100	380	390	700
5		3.45 × 3.44		3	500	3.4	830-1210	390	400	700
6		3.45 × 3.44		3	350	3.2	435-755	390	410	700
7		3.45 × 3.44		3	350	3.2	435-755	415	435	700



AT Series / Top View 72140 UV

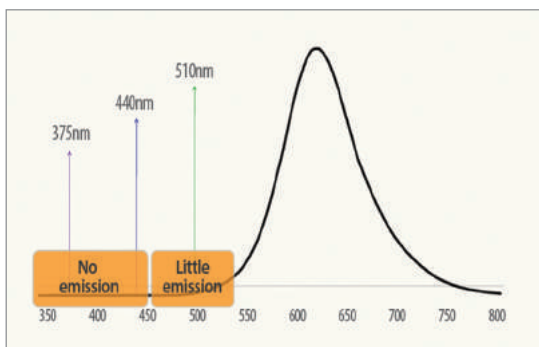
No.	Device	Size(mm)	Color	Power(W) Max.	Test Current (mA)	Vf(V) Typ.	Power (mW)	Peak Wavelength (nm)		2θ½(°)	Max Current (mA)
								Min.	Max.		
1	AT72SNU	7.26 × 14.2	UV	1	350	3.5	275-515	365	370	130	350
2		7.26 × 14.2		1	350	3.5	225-435	365	375	130	350
3		7.26 × 14.2		1	350	3.4	435-755	390	410	130	350
4		7.26 × 14.2		1	350	3.4	435-755	390	410	130	350
5		7.26 × 14.2		3	700	3.7	515-1050	365	370	130	700
6		7.26 × 14.2		3	700	3.6	875-1680	380	380	130	700
7		7.26 × 14.2		3	700	3.5	1050-1680	390	390	130	700
8		7.26 × 14.2		3	700	3.7	875-1400	390	390	130	700



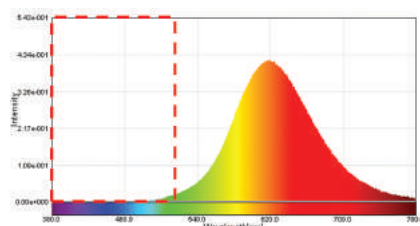
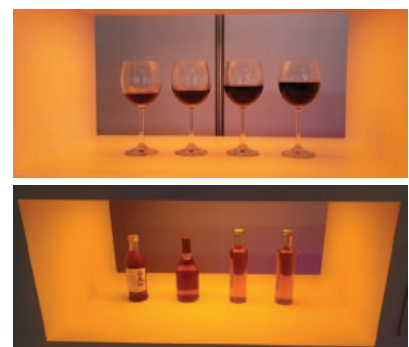
Custom Spectrum Series / Wine & Champagne Display LED - Pastel Color LED

Alcoholic beverages(wine & champagne) show degradation due to photo-oxidation. Lights that have a wavelength of under 500nm are the main cause for this oxidation. Significant damage comes from the visible spectrum of wavelengths above UV and particularly 375nm, 440nm and up to 510nm.

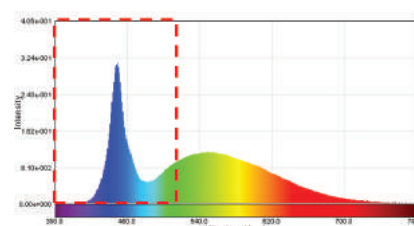
ALLIX customized phosphor conversion amber spectrum emits no light under 500nm and the minimum output at 510nm. It is optimally designed for wine and champagne display lighting, reducing photo oxidation and making the colors of beverages more vivid and vibrant.



Size(mm)	5630
Power(W)	0.2
If(mA)	65
Vf(V)	2.9-3.2
ØV(lm)	13-14
WD(nm)	592-595
Wp(nm)	616-618
CIE x	0.5858-0.5870
CIE y	0.4020-0.4076



ALLIX Wine LED spectrum

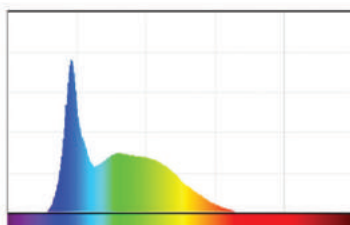


General LED spectrum

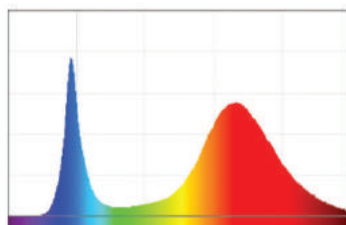
Available In
All Package

Custom Spectrum Series / Pastel Color LED

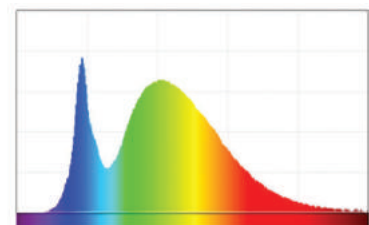
No.	Device	Size(mm)	COLOR	Power(W)	If(mA)	Vf(V)	CIE-x	CIE-y	Luminous Flux(lm)
1	AT56SNIB	5.6 × 3.0 × 0.9T	Ice Blue	0.2	65	2.8-3.3	0.250	0.305	23-28
2	AT56SNCW	5.6 × 3.0 × 0.9T	Cherry White	0.2	65	2.8-3.3	0.385	0.230	9-10
3	AT56SNLI	5.6 × 3.0 × 0.9T	Lime	0.2	65	2.8-3.3	0.350	0.430	19-34
4	AT56SNPK	5.6 × 3.0 × 0.9T	Pink	0.2	65	2.8-3.3	0.375	0.185	7-8
5	AT56SNLY	5.6 × 3.0 × 0.9T	Lemon Yellow	0.2	65	2.8-3.3	0.450	0.440	24-25
6	AT56SNAZ	5.6 × 3.0 × 0.9T	Azalea	0.2	65	2.8-3.3	0.535	0.270	6-7



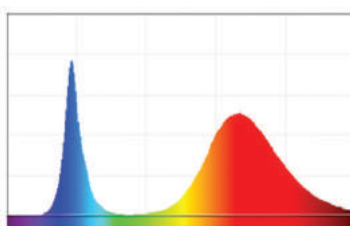
Ice Blue



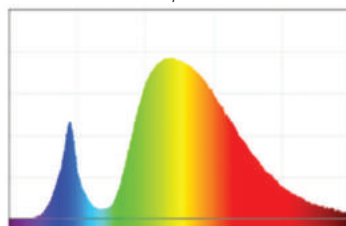
Cherry White



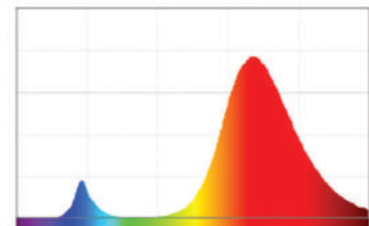
Lime



Pink



Lemon Yellow



Azalea

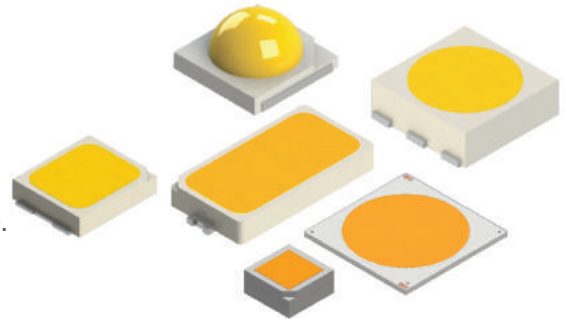
Custom Spectrum Series / LED for Horticulture (Plant Grow Lighting)

Features of Allix LED for Horticulture

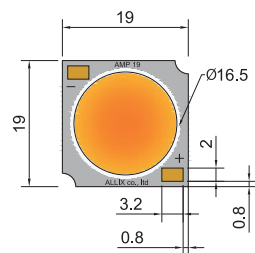
ALLIX's phosphor conversion technology

ALLIX has developed its unique phosphor conversion technology to produce specialized plant-growth LED packages.

Two different wavelengths can be emitted in a single LED package.



Characteristics of Phosphor Converted LED

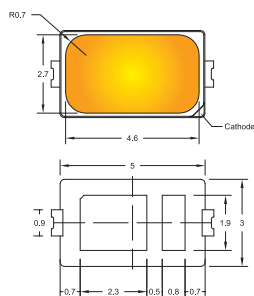


COB Type

Available In
All Type

Device No.	Wp[nm]	Wd[nm]	PPF [$\mu\text{mol/s}$]	PPF/W	Lumen [lm]	CRI	CIE x	CIE y	IF[mA]	VF[V]
AM19P-P26(PGWH)	451	603	40.2	1.55	1910	80	0.3807	0.3167	720	36
AM19P-P26(PGRB)	650	-	36.6	1.41	1350	-	0.4294	0.2054	720	36

► 4W ~ 100W Available

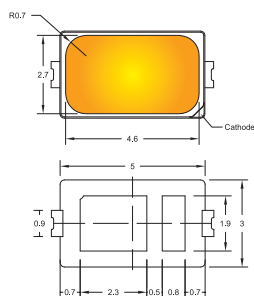


SMD 5630PKG

Available In
All Package

Device No.	Wp[nm]	Wd[nm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Iv[mcd]	CIE x	CIE y	IF[mA]	VF[V]
AT56SNP(PG645)	646	590	0.25	1.33	5250	0.5224	0.4024	65	2.9
AT56SNP(PG655)	654	618	0.21	1.11	1750	0.6637	0.3143	65	2.9
AT56SNW(PGWH)	451	603	0.30	1.59	6750	0.3901	0.3375	65	2.9
AT56SNP(PGRB)	650	-	0.27	1.43	3000	0.4494	0.2184	65	2.9

Characteristics of Pure Chip Type



SMD 5630PKG

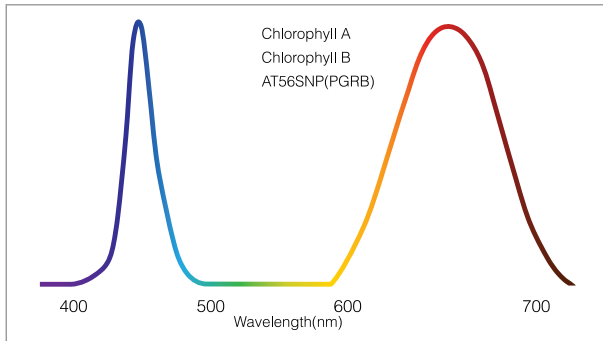
Available In
All Package

Device No.	Wp[nm]	Wd[nm]	PPF [$\mu\text{mol/s}$]	PPF/W [$\mu\text{mol/J}$]	Iv[mcd]	CIE x	CIE y	IF[mA]	VF[V]
AT56SNB(PG455)	455	458	0.32	1.70	1100	0.1529	0.0251	65	2.9
AT56SNR(PG660)	658	650	0.07	0.49	1000	0.7143	0.2793	65	2.1
AT56SNI(PG730)	736	-	0.11	0.77	Øe[mw]17	0.7291	0.2781	65	2.2

* All measured values are typical.
 * PAR is the photosynthetic active radiation from 400 to 700nm.
 * PG730 typical PPF is measured from 700 to 800nm.
 * The maximum current is 180 ~ 200mA.

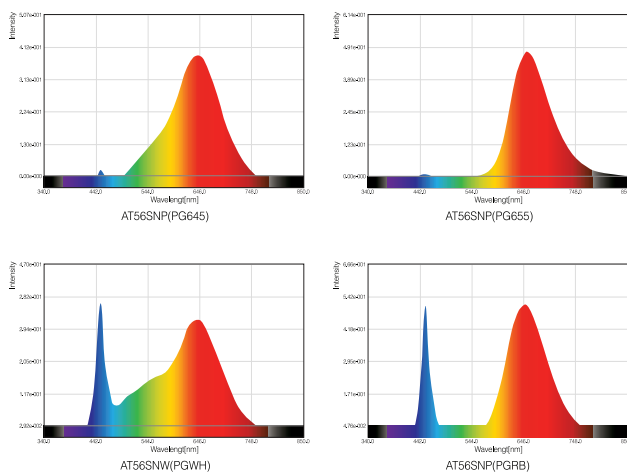
Custom Spectrum Series / LED for Horticulture (Plant Grow Lighting)

Spectrum

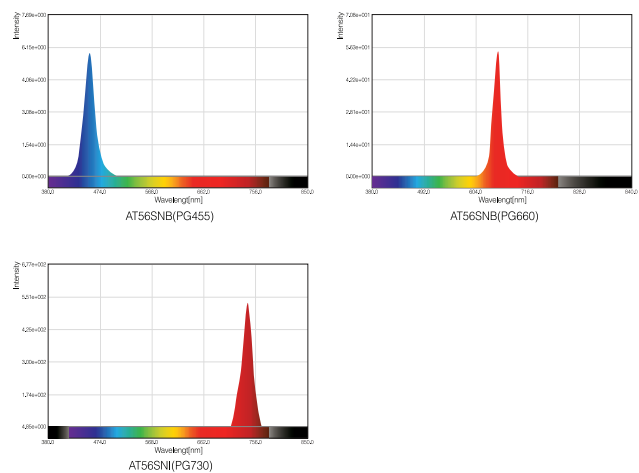


Chlorophyll A required for plant growth Chlorophyll B provides wavelengths that are absorbed by one package, providing more equal light to plants than the combination of Red & Blue chip LEDs (conventional method). In particular, ALLIX-retained phosphor compounding technology can be used to implement a rich spectrum in the Red region.

Phosphor Converted LED



Pure chip type



Test results

- Ginsenoside F2, a unique saponin playing an role as a remedial element, has increased 4 times than usual.
- Leaves and stems have strengthened.
- Cultivation period was reduced from 40~60 days to 20~30 days.



Test results

- Plants growth rate has increased.
- Plants germination has been stimulated.
- Cultivation period was shortened.

Custom Spectrum Series / Museum & Art Gallery Lighting LED

ALLIX believes that each person has its own color suits them perfectly.

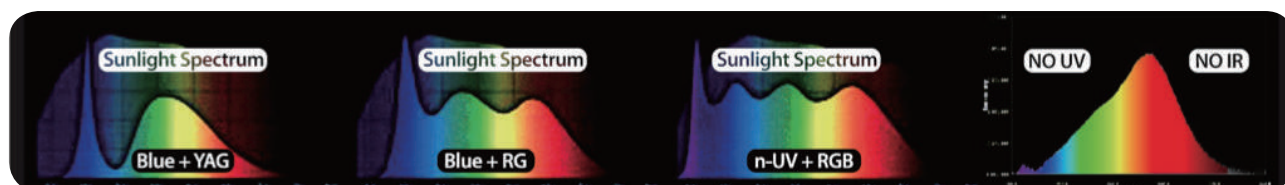
Lights are no longer just the tools which light up the places.

Lights have played roles from as daily necessities to enhance efficiency and to maximize use of a space to as a sensitivity booster.

Customize your own lighting designs at ALLIX.

ALLIX Museum & Art Gallery Lighting LED

- **ALLIX® XENOLED®**, ALLIX's high color quality product brand, is made with Near Violet chip and the multiple phosphor.
- **ALLIX® XENOLED® II** represents object colors as close as the ones under the natural sunlight and provides museum gallery lighting with accurate color and continuous spectrum distribution.



- ① General LED Solution (Blue + YAG Phosphor)
 - High Brightness
 - Poor color rendering
 - High blue spikes
- ② Good LED Solution (Blue + R, G Phosphor)
 - Good color rendering
 - High R9 Values
 - Peaks of blue spikes
- ③ Best LED Solution ALLIX™ XENOLED® (n-UV + R, G, B Phosphor)
 - Excellent color rendering (High R9, R12, values)
 - Minimal Blue Spike
 - No UV, IR rays

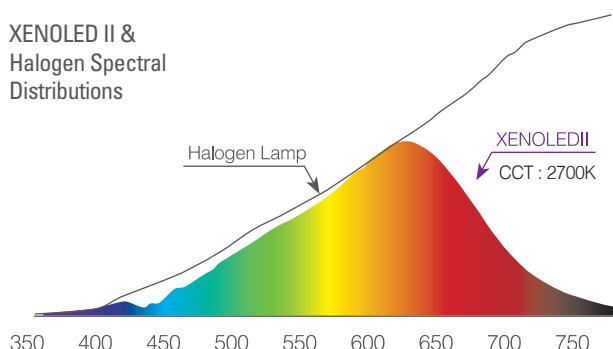
High CRI

- Color Rendering Index(CRI) : a quantitative measure of the ability of a light source to reveal the colors of various objects faithfully in comparison with natural light source.
- It expresses each color from R1 to R15
- It is very important in the field of Museum & Gallery Lighting in that it shows a more accurate representation of the actual color, R9 for 'red', R12 for 'blue', and R13 for 'skin tone' value

ALLIX high CRI techniques

- **ALLIX® XENOLED® II** is able to express the natural color accurately based on high general color rendering and special color rendering.
- IR wavelength of a normal halogen lamp is mostly thermal energy which can cause damage to the work.
- Typical fluorescent lamps and existing LED light induce discoloration and denaturation of the work with Blue Spike and UV wavelength.

XENOLED II &
Halogen Spectral
Distributions



R1	R2	R3	R4	R5	R6	R7	R8
Light grayish red	Dark grayish yellow	Strong yellow green	Moderate yellowish green	Light bluish green	Light blue	Light violet	Light reddish purple
99	99	98	97	98	98	97	98
R9	R10	R11	R12	R13	R14	R15	R16
Strong red	Strong yellow	Strong green	Strong blue	Light Yellowish Pink (skin)	Moderate olive green	Asian Skin	Ra
95	99	95	99	98	98	98	99

Why High CRI XENOLED II ?

- Almost 99 in CRI(Ra), over 95 in R9 and R12
- No UV, NO IR rays
- No blue spikes : preferred in Museums and Art galleries.

LED	LED	Halogen Lamp	ALLIX
CRI 80	CRI 90	CRI 99	CRI 99
R9 < 30	R9 < 65	R9 < 99	R9 = 95 ~ 99
R12 < 45	R12 < 75	R12 < 99	R12 = 95 ~ 99

① High R12 Value

R12 Value(Strong blue) are prevalent in old paintings.

② Representing Halogen Spectrum

Halogen has CRI 99.

③ UV, IR rays

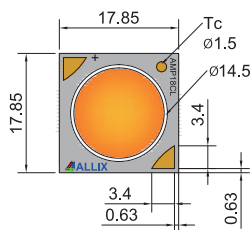
Halogen emits UV, IR rays, which can harm human health.

④ No Blue Spikes

Blue spikes can discolor oil paints in the paintings.

Custom Spectrum Series / Museum & Art Gallery Lighting LED

Type A

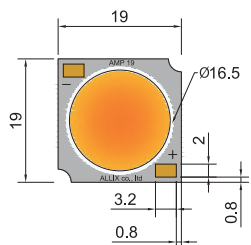


Available In
All Type

Series	Device	Size	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
AMP18CL	AM18CLW-P26-A-XL	17.85 × 17.85 × 1.5T	26	800	34~40	4,000K (2,700K~5,500K)	typ.98	1,560~2,860	60~110	14

► 4W~100W Available

Type B

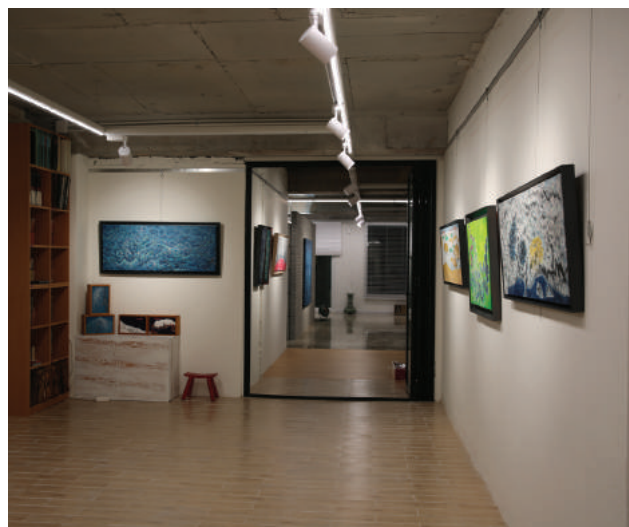


Available In
All Type

Series	Device	Size(mm)	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Luminous Efficacy(lm/W)	LES(mm)
AMP19	AM19W-P26-A-XL	19 × 19 × 1.5T	26	720	34~40	4,000K (2,700K~5,500K)	typ.98	1,560~2,860	60~110	15.5

► 4W~100W Available

Installation Case



Recommended Usage

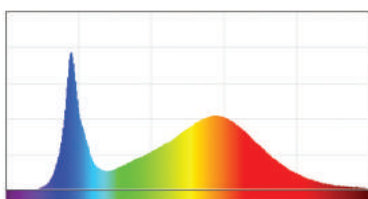
- Exhibitions such as art museums, museums, art galleries
- Storefronts, counters, shelves, etc.
- Partial lighting in hotel lobby, corridor, cafe, living room

Custom Spectrum Series / Retail Lighting · Premium Lighting · Amber Lighting

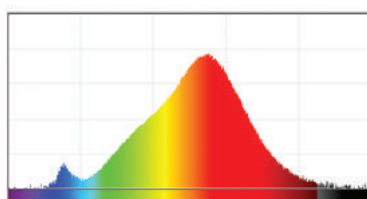
Available In
All Package

Retail Lighting / Meat Color Lighting · Bakery Lighting

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CIE-x	CIE-y	Luminous Flux(lm)	Application
1	AT56SNP	5.6 × 3.0 × 0.9T	Pink	0.2	65	2.8-3.3	0.3783	0.3095	24-26	Meat color Lighting
No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI(Ra)	Luminous Flux(lm)	Application
2	AT56SNW-A	5.6 × 3.0 × 0.9T	White	0.2	65	2.8-3.3	2,200	min.96	16-20	Bakery Lighting
3	AT56SNW-A	5.6 × 3.0 × 0.9T	White	0.2	65	2.8-3.3	4,000	min.95	18-24	



Meat color Lighting

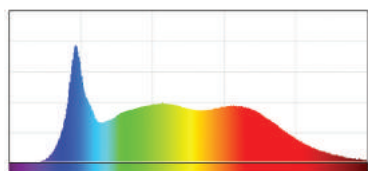


Bakery Lighting

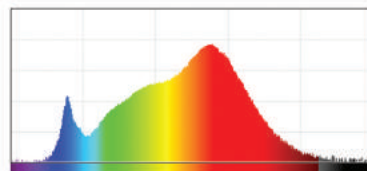
Available In
All Package

Premium Lighting / Cosmetic Lighting · Clothing Shop Lighting

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	CCT(K)	CRI			Luminous Flux (lm)	Application
								Ra	R9	R13		
1	AT54BNW-A	5.6 × 3.0 × 1.6T	White	0.2	60	2.8-3.3	5,000	97	95	98	17-22	Cosmetic Lighting
2	AT56SNW-A	5.6 × 3.0 × 0.9T	White	0.2	65	2.8-3.3	3,000	98	98	99	19-22	Clothing Shop Lighting



Cosmetic Lighting

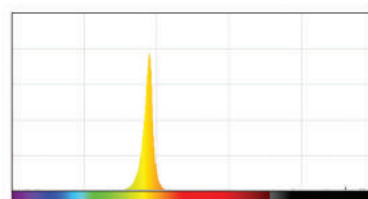


Clothing Shop Lighting

Available In
All Package

Amber Lighting / Turtle Lighting

No.	Device	Size(mm)	Color	Power(W)	IF(mA)	VF(V)	Dominant Wavelength(nm)	Luminous Flux (lm)	Application
1	AT56SNA	5.6 × 3.0 × 0.9T	Pure amber	0.4	120	2.8-3.4	585-595	12	Turtle Lighting



Turtle Lighting

A-Module Series

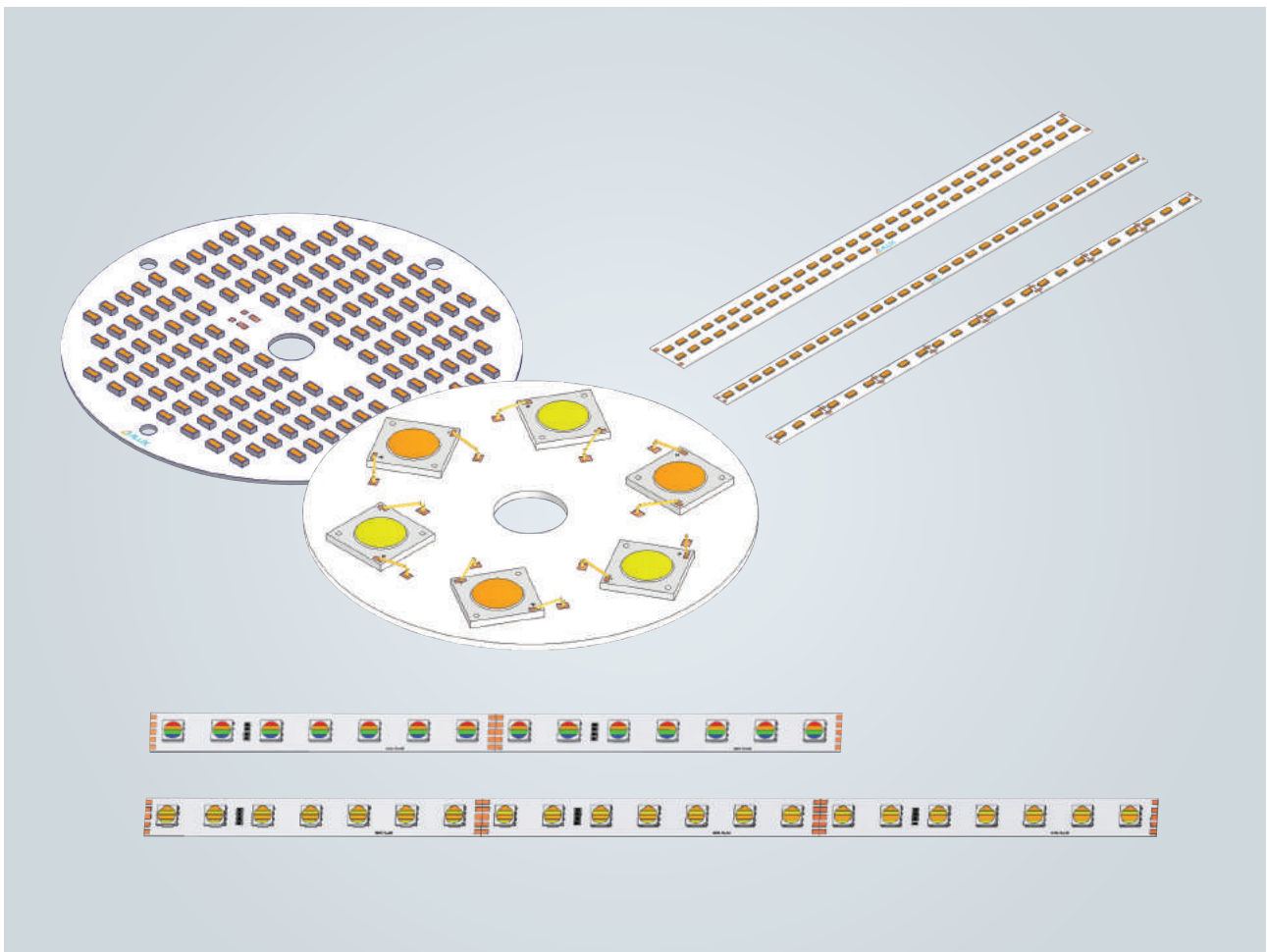
- From linear shape to round shape, we tailor make your own board.
- You can get the highest color quality LED modules ranging from white(2,000K~10,000K) to non-white.

Available in

ANY COLOR

ANY SIZE

ANY SHAPE





"LED is a convenient, enriched, future-oriented and eco-friendly technology that helps create and maintain improved environment. ALLIX® will continue to be committed to the advancement of the highest-quality colors and LED lights that will benefit human lives."

- CEO, Jong Uk "Lonnie" An