



P3210005.56

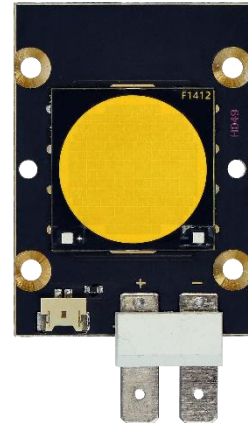
Chip-on-board LED

Applications

- Photographic/broadcast lighting
- Photoelectric device and relevant research

Features

- Industrial highest CRI performance
- 400W power consumption
- TLCI & TM-30 specified
- $\Phi 25\text{mm}$ LES (Light-Emitting Surface)



[About Yujileds[®]](#)

Rev Version: 2.0

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General description

Yujileds® BC series P3210005.00 LED aims to provide the industrial highest color rendition performance and super-compact layout simultaneously. With flip-chip technology, the LED achieves 400W within the $\Phi 25$ mm LES (Light-Emitting Surface) which is the ideal solution for the applications requiring high power density. It can be widely used in professional stage lighting, photography lighting, cinematography lighting or photoelectric device and relevant research.

The BC series P3210005.00 LED also supports the unique service/certification by Yujileds® as described below.



TM-30-18 specification

The most advanced colorimetric for color rendition, widely recognized as the successor of CRI.



TLCI specification

Based on the Macbeth ColorChecker, for evaluating the colorimetric quality of the broadcast lighting.



REACH compliance (Phosphor)

Ordering information

PRODUCT CODE	CCT	CHROMATICITY BINS
P3210005.56	5600K	56M
P3210005.XX	Custom CCT	-

Characteristics

Electrical-optical characteristics ($T_A = 25^\circ\text{C}$, 10,000mA)

PARAMETER	SYMBOL	VALUE			UNIT	TOLERANCE
		MIN.	TYP.	MAX.		
Forward voltage	V_F	38	-	44	V	± 0.05
Luminous flux	Φ_{5600K}	-	26000	-	lm	-
Correlated color temperature¹	CCT_{5600K}	5300	-	5900	K	-
Color rendering index	R_a	95	-	-	-	± 1
TCS R9 (CRI red)	R_9	-	90	-	-	-
Fidelity index²	R_f	-	92	-	-	-
Gamut index²	R_g	-	100	-	-	-
TLCI 2012³	-	-	97	-	-	-
Reverse current	I_r	-	-	12	μA	$\pm 0.1 (V_r = 70\text{V})$
View angle	$2\theta_{1/2}$	-	120	-	Deg	± 5

1. Yujileds® promises the chromaticity coordinate tolerance of ± 0.0015 (CIE 1931 x,y) based on Yuji standard equipment shall prevail.
2. Defined by the IES TM-30-18 method, this data is for trial.
3. Defined by the EBU, TLCI is the abbreviation of Television Lighting Consistency Index, this data is for trial.

Absolute maximum ratings ($T_A = 25^\circ\text{C}$)

PARAMETER	SYMBOL	LIMIT	UNIT
Power Consumption	P_D	400	W
DC Forward Current (pulsed)¹	I_{FP}	13	A
DC Forward Current	I_F	10	A
Junction Temperature	T_j	125	$^\circ\text{C}$
Case Point Temperature²	T_c	65	$^\circ\text{C}$
Operating Temperature	T_{opr}	-30 ~ +60	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 ~ +80	$^\circ\text{C}$

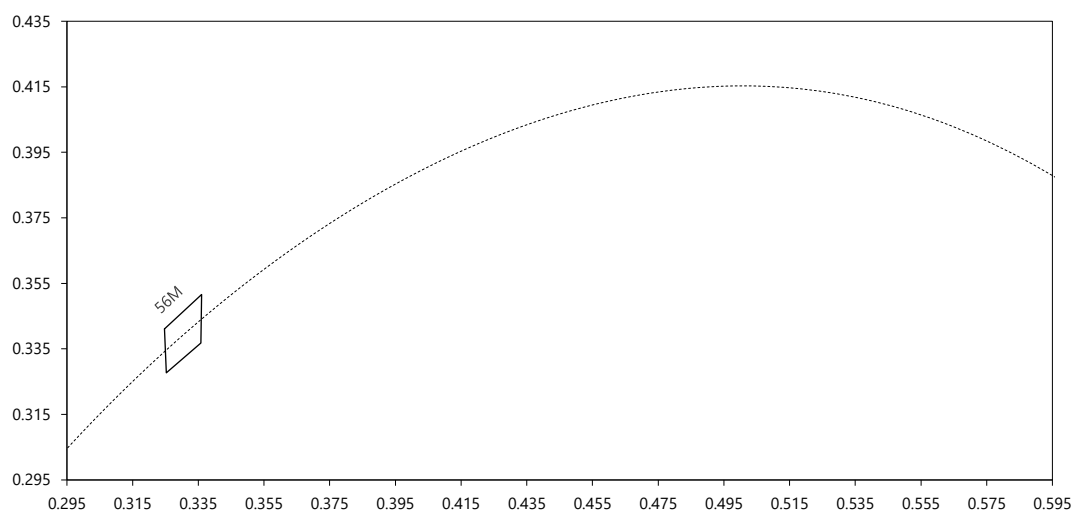
1. Pulse width $\leq 0.1\text{ms}$, duty $\leq 1/10$.
2. See page [Package material and dimension](#).

Chromaticity group and diagram

Chromaticity bins & coordinates

CCT	BIN	CIE 1931 COORDINATES							
		X0	Y0	X1	Y1	X2	Y2	X3	Y3
5600K	56M	0.3247	0.3411	0.3253	0.3277	0.3358	0.3368	0.3360	0.3516

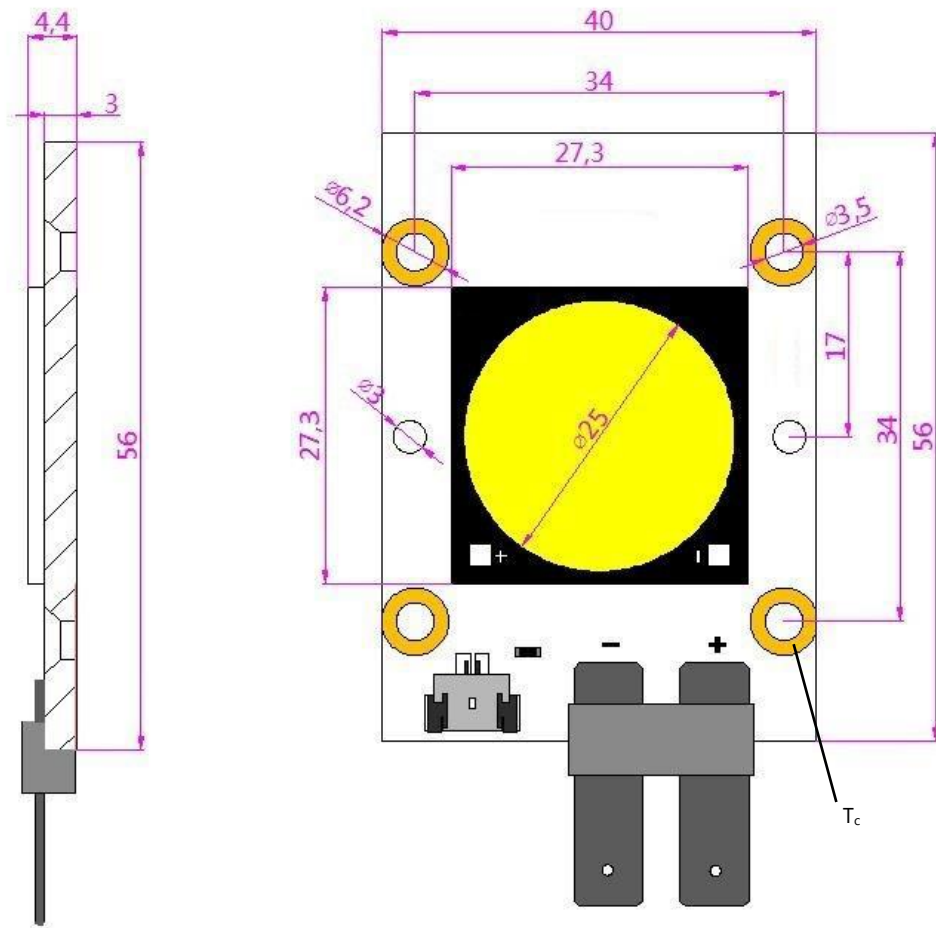
CIE 1931 diagram



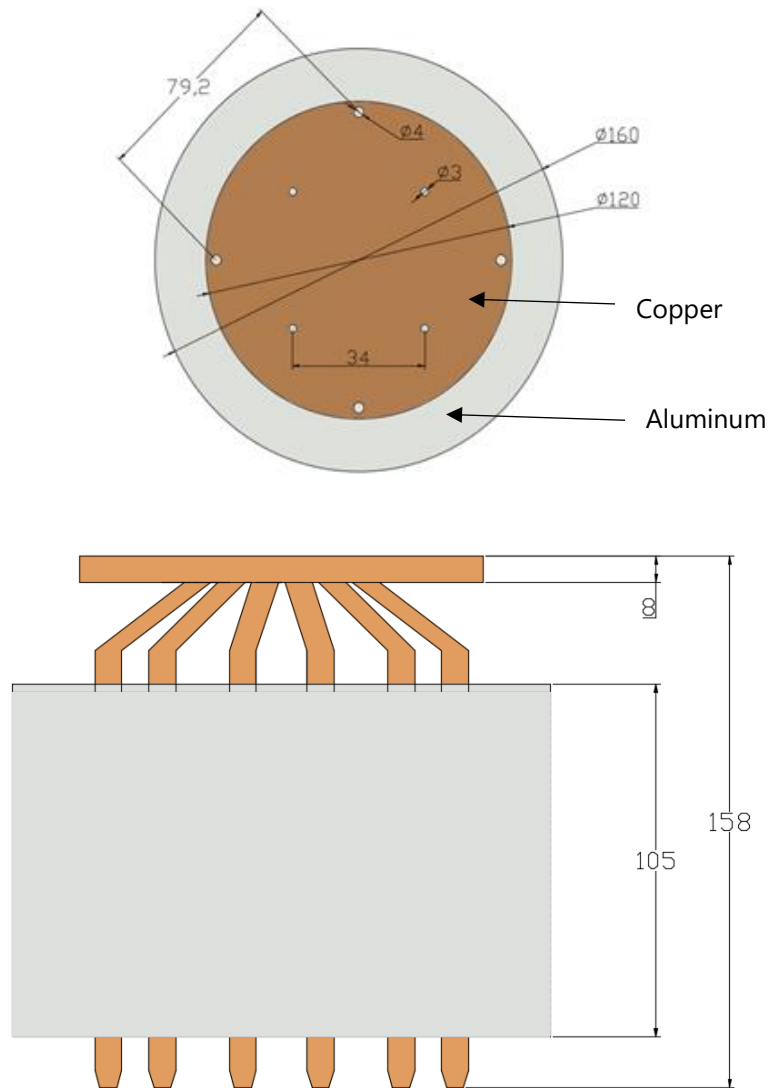
Mechanical dimension

Package layout

All dimensions in mm, tolerance unless mentioned is ± 0.1 mm.



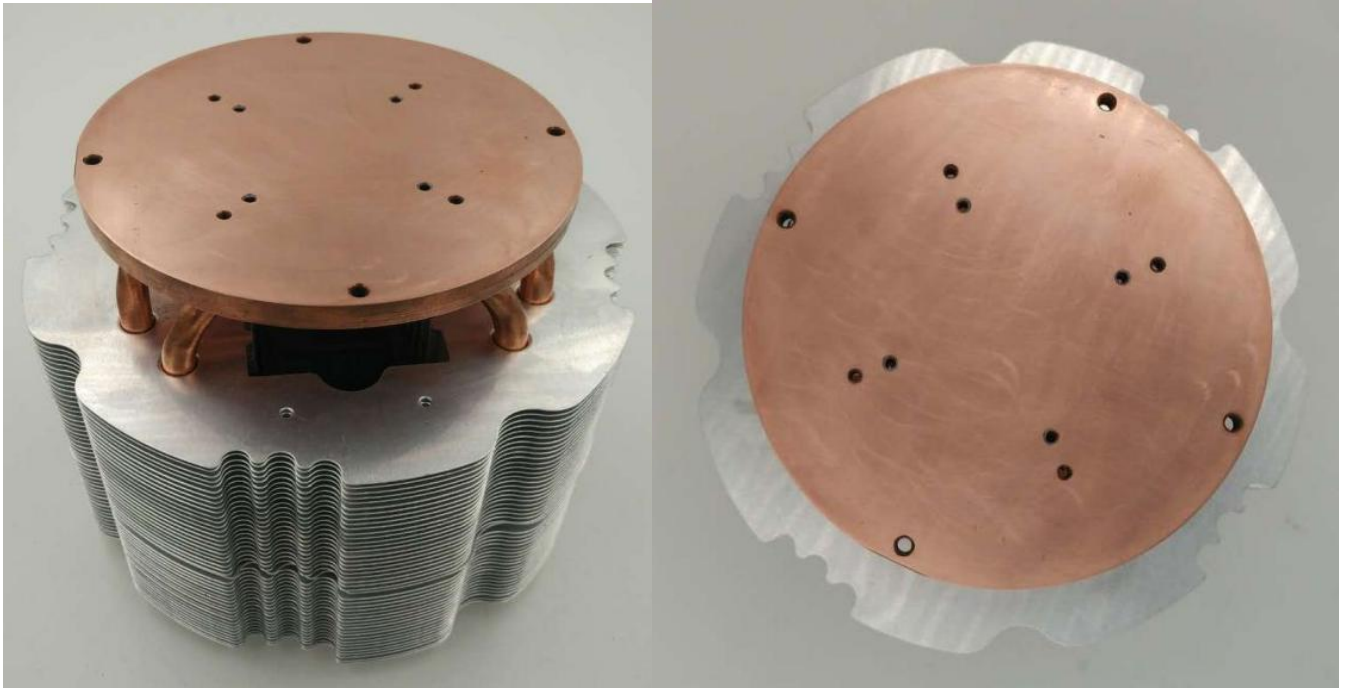
Optional Accessory- Raditor



Weight = 2.1Kg

All measurements are $\pm 0.5\text{mm}$ unless otherwise indicated.

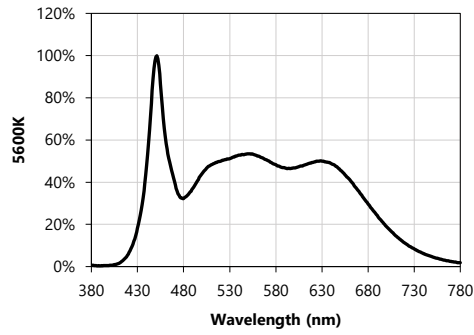
Picture of Radiator



Characteristic graph

Typical spectral power distribution (normalized)

All characteristic curves are for reference only and not guaranteed.



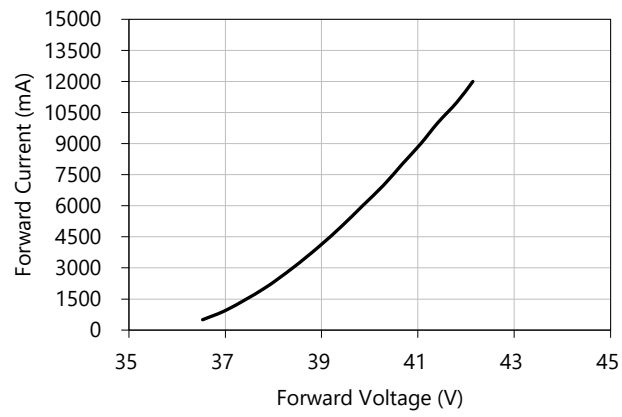
Characteristic graph

Forward current

All characteristic curves are for reference only and not guaranteed.

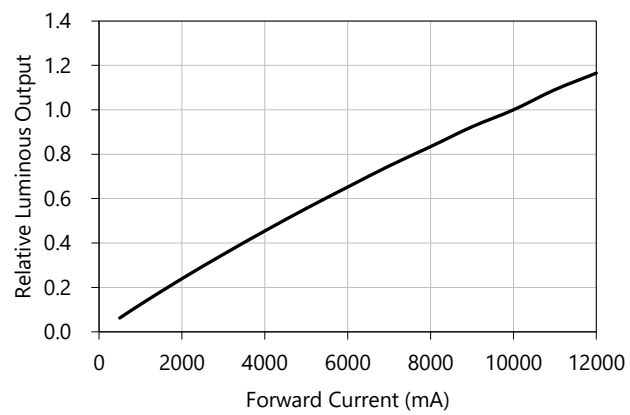
Vs. forward voltage

($T_A = 25^\circ\text{C}$)



Vs. relative luminous flux

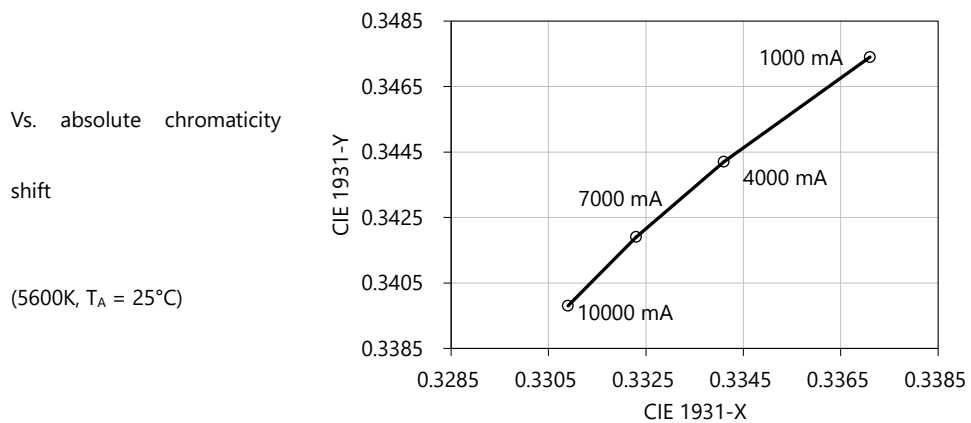
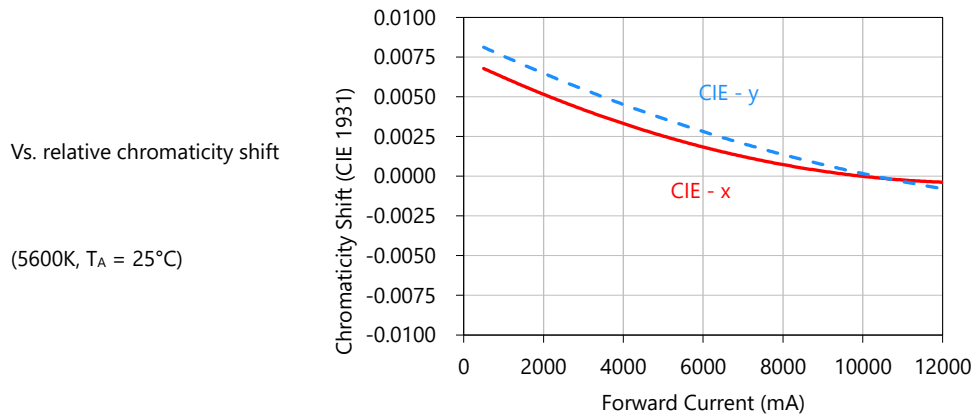
($T_A = 25^\circ\text{C}$)



Characteristic graph

Forward current (continued)

All characteristic curves are for reference only and not guaranteed.



About Yujileds



The Yuji story

Yuji started with LED phosphor materials in 2006, and today we are known for nitride red LED phosphor with superior brightness and stability in the world. With the rapid growth in LED industry during the past years, we have serviced over 260 business customers in over 33 different countries or regions, and established subsidiaries or distributors in 6 locations including China, US, UK and Japan, now we are reaching the global markets with the full coverage efficiently.

Our capabilities and achievements

In Yujileds®, we are a group of people passionate in creating the maximum value for customers. Dedicated to developing LED phosphor, LED light source and final products, we have accumulated unique experience in different projects. Nowadays, over 30 experts are gathered in a variety of areas including but not limited to semiconductor, chemistry, optics, photoelectricity, circuitry, materials and color science.

In commercial markets, we have been dedicating to providing comprehensive solutions for specific applications by deeply understanding these markets. Our goal is not only to offer an LED product simply but is to grow with customers and share the success of a business.

Main website: www.yujiintl.com

Find the comprehensive introduction of Yuji company and our insights into a variety of advanced technologies and applications.

Contact: info@yujigroup.com

Subordinative website: www.yujileds.com

Find more about our products, technical posts, featured support and service, blogs, news and whatever interesting and practical information.

Contact: contact@yujileds.com

Online shop: store.yujiintl.com

Find your favorite Yujileds® products with outstanding quality, fast shipment and superb sale service.

Contact: webstore@yujigroup.com