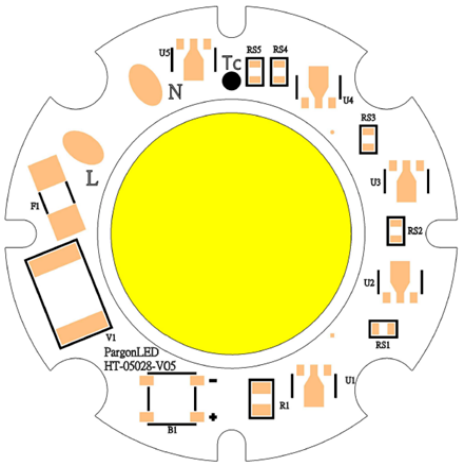
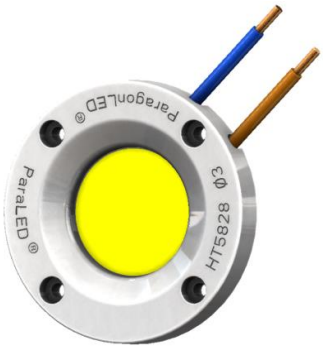
ParagonLED®

ParaLED AC 5028 Series Datasheet



ParaLED®



Introduction :

Compared with DC LED modules, ParagonLED AC COB(Driver on Board)ParaLED® Series module does not need an external driver so that it is able to enhance lifespan and shows compact dimension.

Description :

--120/220/230/277/347/480VAC
--20/30W
--80-130 LM/W
--2700/3000/3500/4000K CCT
--4500/5000/5700/6500K CCT
--70/80/90 CRI
--PF>0.85
--Customized available

Feature and Benefits:

--Driver on Board
--Industry grade solid state components
--Up to 2.5KV Surge protection built-in
--Lifespan>50K hrs TC<105℃
--Lowest thermal resistance

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General Information

Ordering Code Format

C	B	AC	-	xx	-	50	28	-	yyyV	-	zzzz
1	2	3		4		5	6		7		8

7	8
120V	2700
220V	3000
230V	3500
277V	4000
347V	4500
480V	5000
	5700
	6500

1 . Model type

2 . Chip efficacy

3 . Driving condition

4 . Numbers of chips

5 . Outline dimension

6 . Dimension of emission area

7 . Forward voltage (AC)

8 . Correlated color temperature (K)

Characteristics

Parameter	Symbol	Value		Unit
Forward Voltage	V_F	120/220/230/277	347/480	VAC
Forward Voltage	V_F	±10%	±5%	VAC
Operation Frequency	Fop	50/60		Hz
Power Dissipation	P_D	20/30		W
Operating Temperature	T_{op}	-40 ~ +105		℃
Storage Temperature	T_{st}	-40 ~ +105		℃
Surges Protection(L/N)	V_s	2.5		KV
Insulation voltage	Viso[RMS]	120V:1240 / 220V:1440 230V:1460 / 277V:1554 347V:1694 / 480V:1960		VAC
Power Factor	PF	>0.85		
Color coordination	ANSI C78.377:2008		IEC 60081:1997	

ANSI CCT	step*	Cx	Cy
2700K	3	0.458	0.410
3000K	3	0.434	0.403
3500K	3	0.407	0.392
4000K	3	0.382	0.380
4500k	3	0.361	0.366
5000K	3	0.345	0.355
5700k	5	0.329	0.342
6500K	5	0.312	0.328

*Color region stay within MacAdam ellipse from the chromaticity center.

IEC CCT	step*	Cx	Cy
2700K	3	0.463	0.420
3000K	3	0.440	0.403
3500K	3	0.409	0.394
4000K	3	0.380	0.380
5000K	3	0.346	0.359
6500K	5	0.313	0.337

* Color region stay within MacAdam ellipse from the chromaticity center.

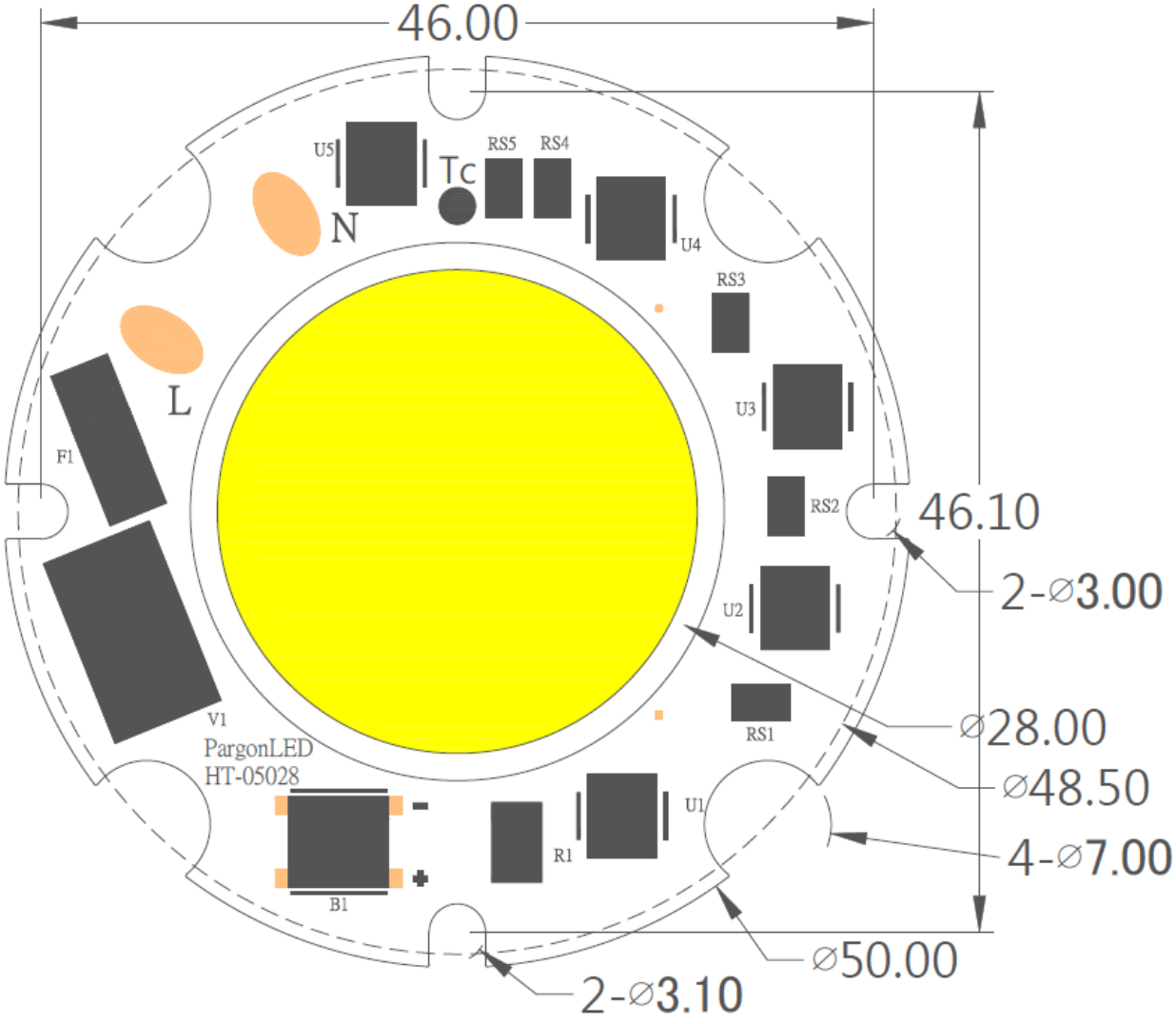
Luminous Flux Characteristic

Product No	Forward Voltage	Watt	lm/W	Lumen	Color rendering	Color Temperature
CDAC-080-05028-120V-2700	120V	20	100	2000	80	2700
CDAC-080-05028-120V-2700	120V	20	90	1800	90	2700
CDAC-080-05028-120V-3000	120V	20	100	2000	80	3000
CDAC-080-05028-120V-3000	120V	20	90	1800	90	3000
CDAC-080-05028-120V-5000	120V	20	110	2200	70	5000
CDAC-080-05028-120V-5000	120V	20	100	2000	80	5000
CFAC-080-05028-120V-2700	120V	30	90	2700	80	2700
CFAC-080-05028-120V-2700	120V	30	80	2400	90	2700
CFAC-080-05028-120V-3000	120V	30	90	2700	80	3000
CFAC-080-05028-120V-3000	120V	30	80	2400	90	3000
CFAC-080-05028-120V-5000	120V	30	100	3000	70	5000
CFAC-080-05028-120V-5000	120V	30	90	2700	80	5000
CDAC-078-05028-220V-2700	220V	20	110	2200	80	2700
CDAC-078-05028-220V-2700	220V	20	100	2000	90	2700
CDAC-078-05028-220V-3000	220V	20	110	2200	80	3000
CDAC-078-05028-220V-3000	220V	20	100	2000	90	3000
CDAC-078-05028-220V-5000	220V	20	120	2400	70	5000
CDAC-078-05028-220V-5000	220V	20	110	2200	80	5000
CFAC-078-05028-220V-2700	220V	30	100	3000	80	2700
CFAC-078-05028-220V-2700	220V	30	90	2700	90	2700
CFAC-078-05028-220V-3000	220V	30	100	3000	80	3000
CFAC-078-05028-220V-3000	220V	30	90	2700	90	3000
CFAC-078-05028-220V-5000	220V	30	110	3300	70	5000
CFAC-078-05028-220V-5000	220V	30	100	3000	80	5000
CDAC-083-05028-230V-2700	230V	20	110	2200	80	2700
CDAC-083-05028-230V-2700	230V	20	100	2000	90	2700
CDAC-083-05028-230V-3000	230V	20	110	2200	80	3000
CDAC-083-05028-230V-3000	230V	20	100	2000	90	3000
CDAC-083-05028-230V-5000	230V	20	120	2400	70	5000
CDAC-083-05028-230V-5000	230V	20	110	2200	80	5000
CFAC-083-05028-230V-2700	230V	30	100	3000	80	2700
CFAC-083-05028-230V-2700	230V	30	90	2700	90	2700
CFAC-083-05028-230V-3000	230V	30	100	3000	80	3000
CFAC-083-05028-230V-3000	230V	30	90	2700	90	3000
CFAC-083-05028-230V-5000	230V	30	110	3300	70	5000
CFAC-083-05028-230V-5000	230V	30	100	3000	80	5000

Luminous Flux Characteristic

Product No	Forward Voltage	Watt	lm/W	Lumen	Color rendering	Color Temperature
CBAC-112-05028-277V-2700	277V	20	110	2200	80	2700
CBAC-112-05028-277V-2700	277V	20	100	2000	90	2700
CBAC-112-05028-277V-3000	277V	20	110	2200	80	3000
CBAC-112-05028-277V-3000	277V	20	100	2000	90	3000
CBAC-112-05028-277V-5000	277V	20	120	2400	70	5000
CBAC-112-05028-277V-5000	277V	20	110	2200	80	5000
CDAC-112-05028-277V-2700	277V	30	100	3000	80	2700
CDAC-112-05028-277V-2700	277V	30	90	2700	90	2700
CDAC-112-05028-277V-3000	277V	30	100	3000	80	3000
CDAC-112-05028-277V-3000	277V	30	90	2700	90	3000
CDAC-112-05028-277V-5000	277V	30	110	3300	70	5000
CDAC-112-05028-277V-5000	277V	30	100	3000	80	5000
CBAC-136-05028-347V-2700	347V	20	110	2200	80	2700
CBAC-136-05028-347V-2700	347V	20	100	2000	90	2700
CBAC-136-05028-347V-3000	347V	20	110	2200	80	3000
CBAC-136-05028-347V-3000	347V	20	100	2000	90	3000
CBAC-136-05028-347V-5000	347V	20	130	2600	70	5000
CBAC-136-05028-347V-5000	347V	20	120	2400	80	5000
CDAC-136-05028-347V-2700	347V	30	100	3000	80	2700
CDAC-136-05028-347V-2700	347V	30	90	2700	90	2700
CDAC-136-05028-347V-3000	347V	30	100	3000	80	3000
CDAC-136-05028-347V-3000	347V	30	90	2700	90	3000
CDAC-136-05028-347V-5000	347V	30	120	3600	70	5000
CDAC-136-05028-347V-5000	347V	30	110	3300	80	5000
CBAC-192-05028-480V-2700	480V	20	110	2200	80	2700
CBAC-192-05028-480V-2700	480V	20	100	2000	90	2700
CBAC-192-05028-480V-3000	480V	20	110	2200	80	3000
CBAC-192-05028-480V-3000	480V	20	100	2000	90	3000
CBAC-192-05028-480V-5000	480V	20	130	2600	70	5000
CBAC-192-05028-480V-5000	480V	20	120	2400	80	5000
CDAC-192-05028-480V-2700	480V	30	100	3000	80	2700
CDAC-192-05028-480V-2700	480V	30	90	2700	90	2700
CDAC-192-05028-480V-3000	480V	30	100	3000	80	3000
CDAC-192-05028-480V-3000	480V	30	90	2700	90	3000
CDAC-192-05028-480V-5000	480V	30	120	3600	70	5000
CDAC-192-05028-480V-5000	480V	30	110	3300	80	5000

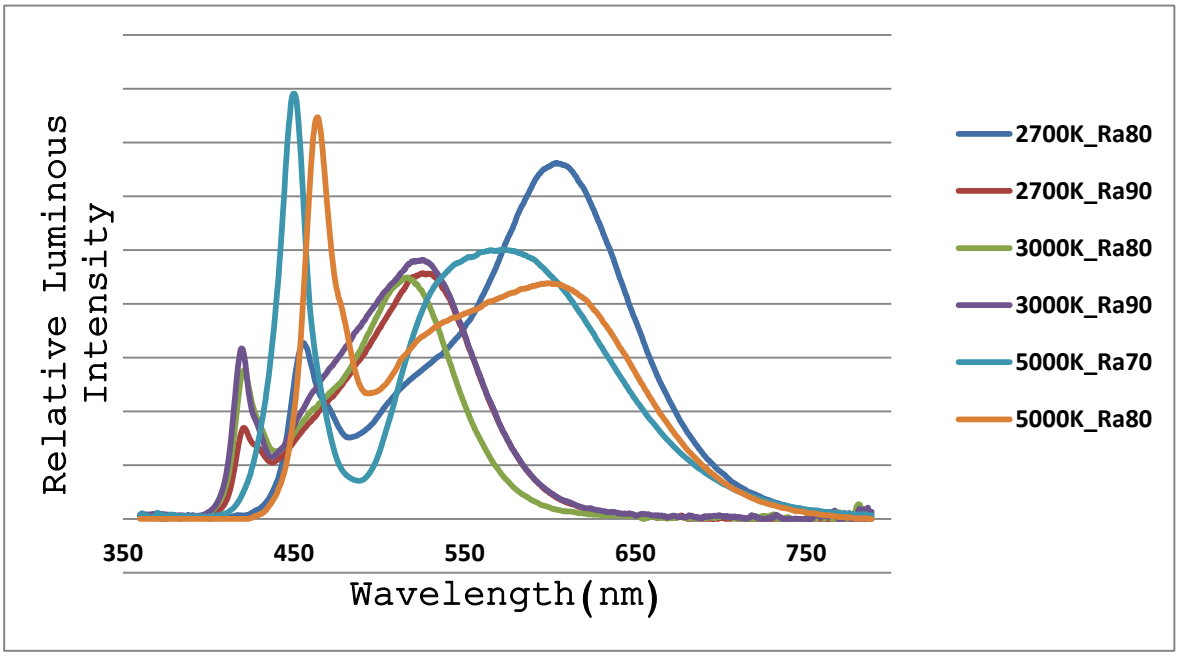
Mechanical Dimensions



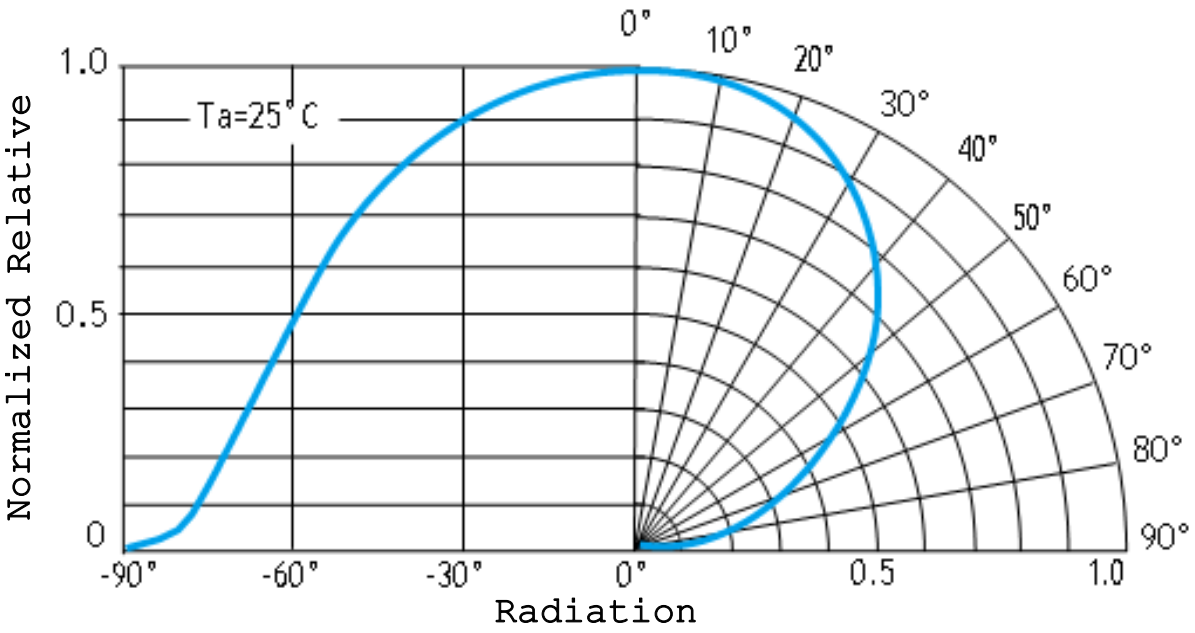
1. All dimensions are measured in mm.
2. Tolerance : ± 0.2mm
3.Thickness:1.0±0.1mm

Characteristic curve

Color Spectrum

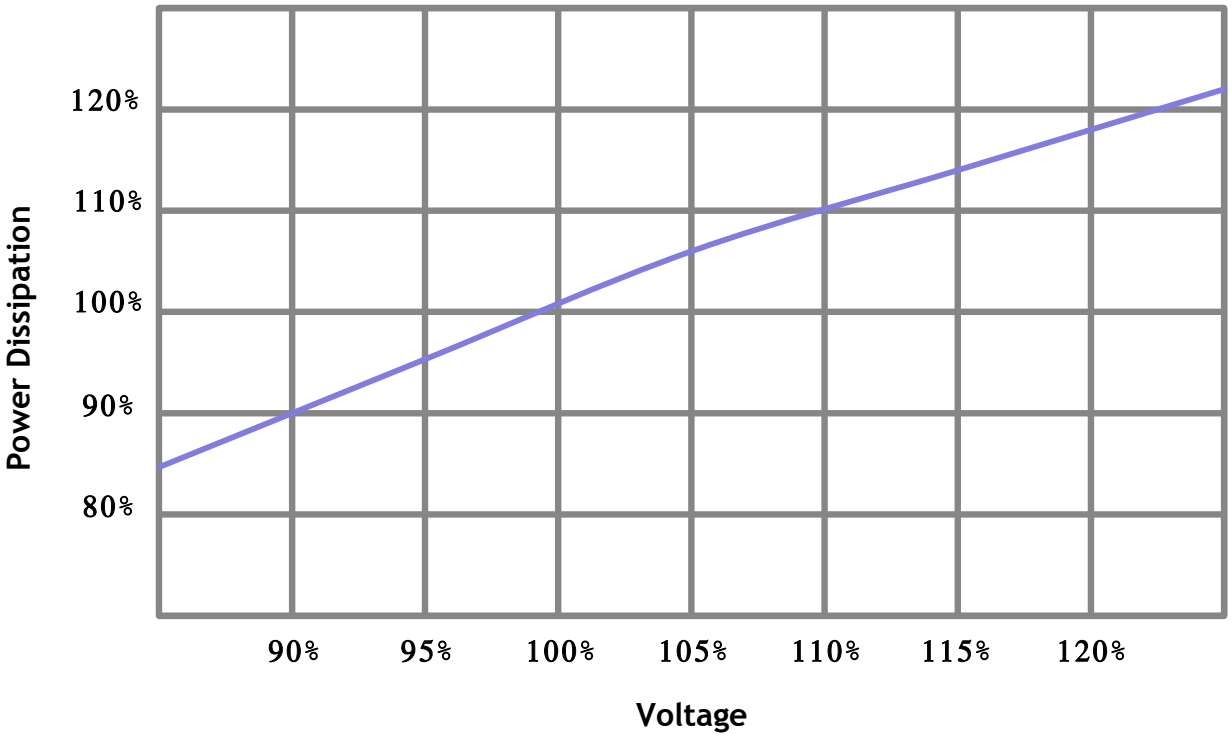


Beam Pattern

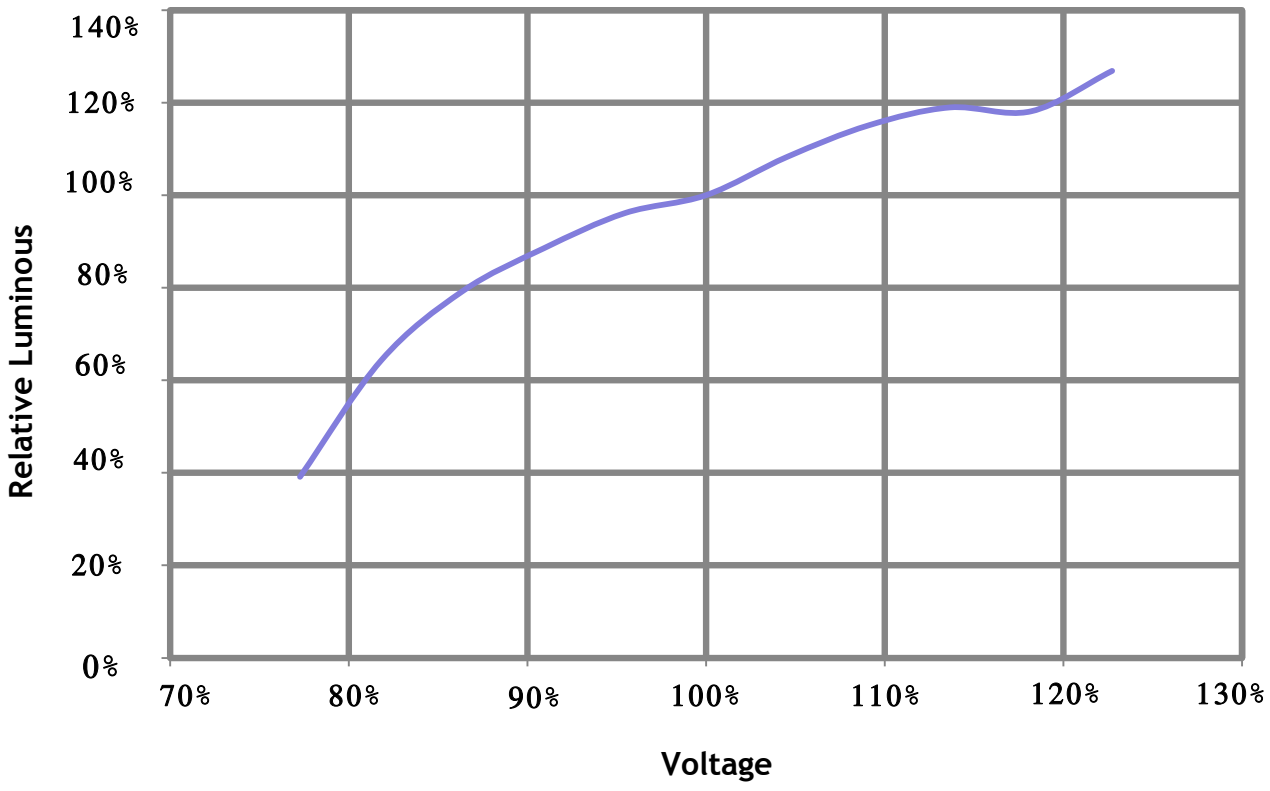


Characteristic curve

Power Dissipation vs. Voltage



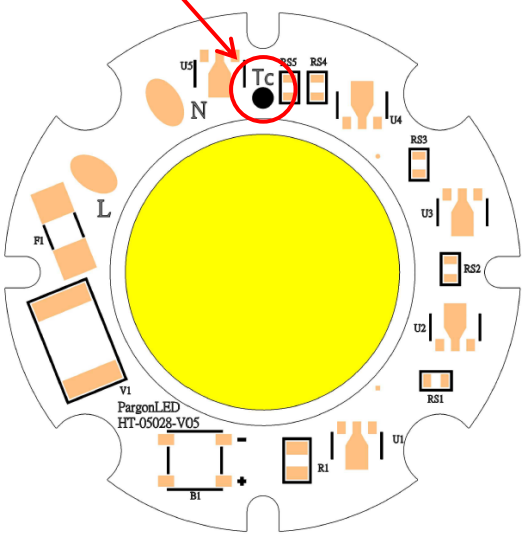
Relative Luminous Flux vs. Voltage



Reliability

No.	Test Item	Test Condition	Remark
1	Temperature Cycle	-40°C~100°C (30 mins / 30 mins)	100 Cycle
2	Low-Temperature Storage	Ta= -40°C	1000 hrs
3	High-Temperature Storage	Ta=105°C	1000 hrs
4	High Temperature High Humidity Life test	Ta=85°C, RH=85%	500 hrs
5	High Temperature Operation Life test	Tc = 55°C / 85°C / 105°C	9000 hrs
6	Super High Temperature Operation Life test	Tc = 145°C	500 hrs
7	ON/OFF Test	3 sec ON, 3 sec OFF	2Million times

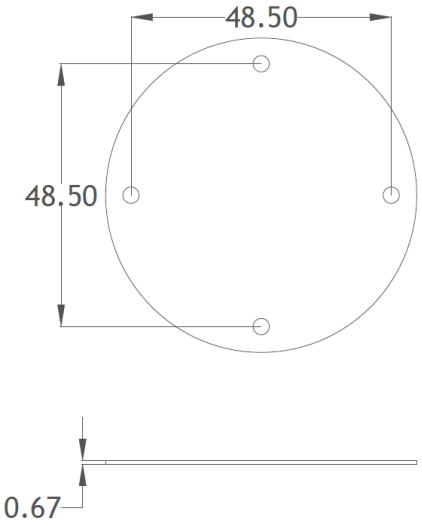
Ta : Temperature Ambient
RH : Relative Humidity
Tc Point



Accessory

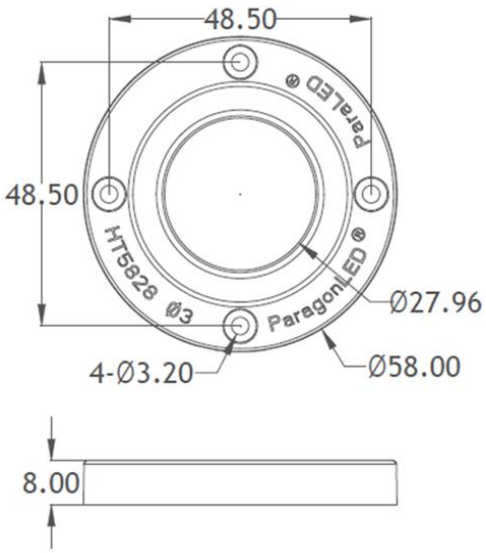
Thermal Pad

Thermal pad applied for:
Gray : 1.5W/mk : 20W
Yellow : 3W/mk : 30W

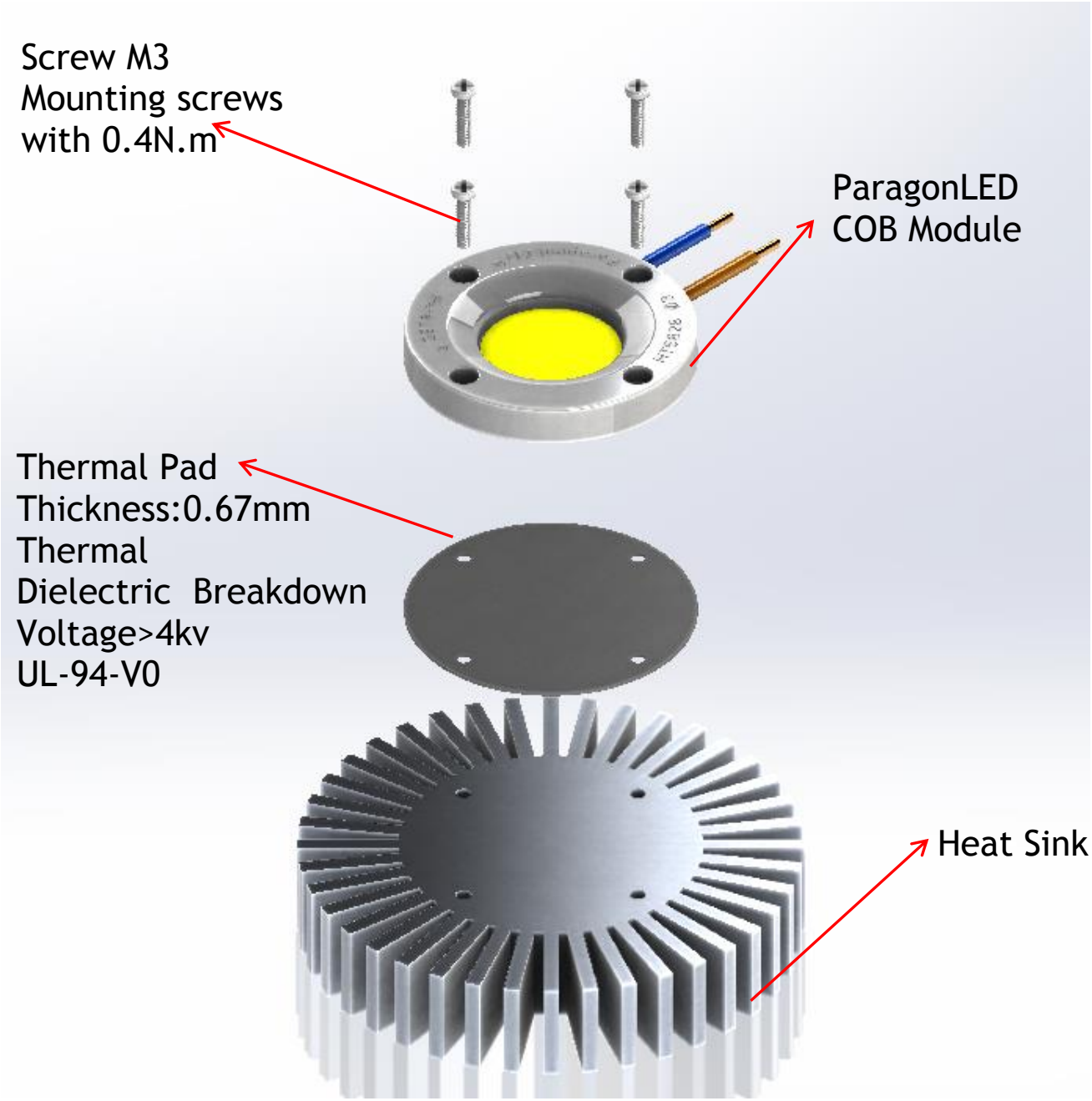


Protection ring

Dimensions (ØxH):58x8 mm
NO. HT5828



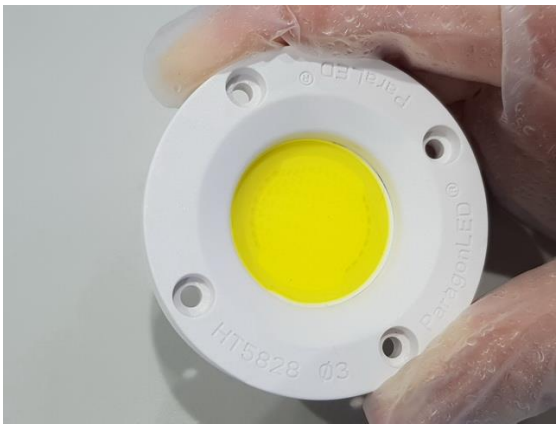
Assembly Notes



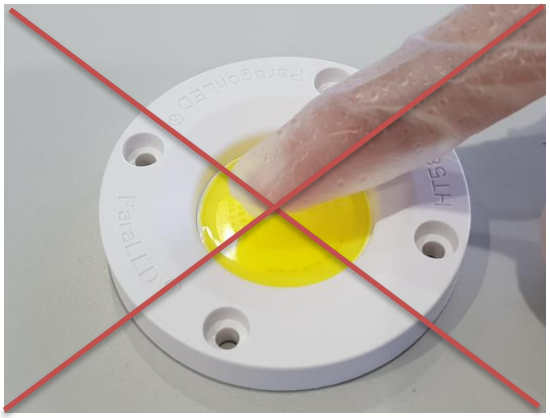
Assembly Notes

Correct

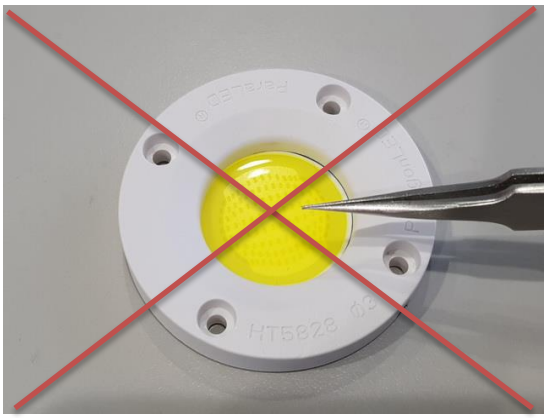
Recommended to
use antistatic gloves



Wrong



Do not touch the
emitting area



Do not touch the
emitting area

About ParagonLED

Established in 2008, Paragon Semiconductor Lighting Technology Co., Ltd. (ParagonLED®) has been devoted to be a comprehensive supplier of COB LED products. Our product lines include 1.AC LED module 2.Thermal management integration 3.Optical integration 4.AI integration 5.Constant power module series. We have been addressed ourselves to provide good quality products to satisfy clients' needs. Meanwhile we are not in a standstill situation, but keep pursuing progression and innovation.

ParagonLED® pride ourselves on our products, so we have overall arrangement in patent; the total applied patents have been reached 135 items until now. Our manufacturing techniques are also patented by many countries, and we still keep moving forward. Meanwhile we supply good quality products with good performance on CRI and efficiency (lm/w), and strictly controlled CCT.

In ParagonLED®, we do not only supply products, but also provide technical recommendations. What's more, we are more than willing to solve problems with clients together. Hence ParagonLED® and our clients can work together to supply reliable and qualified products to end users!
Devote ourselves to bring more added-value to clients

→Direct Marketing + Localized operation
We have offices in Taiwan, in DongGuan, China, so that we can deal with enquiries directly. Also with agents in many different countries, we and they are able to take care of clients on local basis.

→ Fast delivery
With the manufacturing site located in New Taipei City Linkou, Taiwan, we have different yet convenient transportation ways to reach the world.

→Customized service
Through professional and experienced research and development techniques, we provide customized products that can be tailored to different requirements.