SPECIFICATIONS

High Power LED Lamp大功率LED产品规格书

TOPLITE

MODEL：TOP-HR511B-SA-1W

上海鼎晖科技股份有限公司
SHANGHAI TOPLITE TECHNOLOGY CO.,LTD.

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www.ledtoplite.com

TECHNICAL DATA SHEET
TOP-HR511B-SA-1W

1. FEATURES

※ Soldering method: SMT,

※ Small package with high efficiency.

※ High reliability and a broad range of colors and packages

※ Easy mounting on P.C. boards.

※ ROHS compliant.

2. DESCRIPTION

※ These devices are designed from advanced optical grade epoxy, which provide superior high temperature performance and excellent moisture resistance.

3. APPLICATION

※ General lighting solutions

※ Decorative and Entertainment Lighting

※ Signal and Symbol Luminaries for orientation marker lights (e.g. steps, exit ways, etc.)

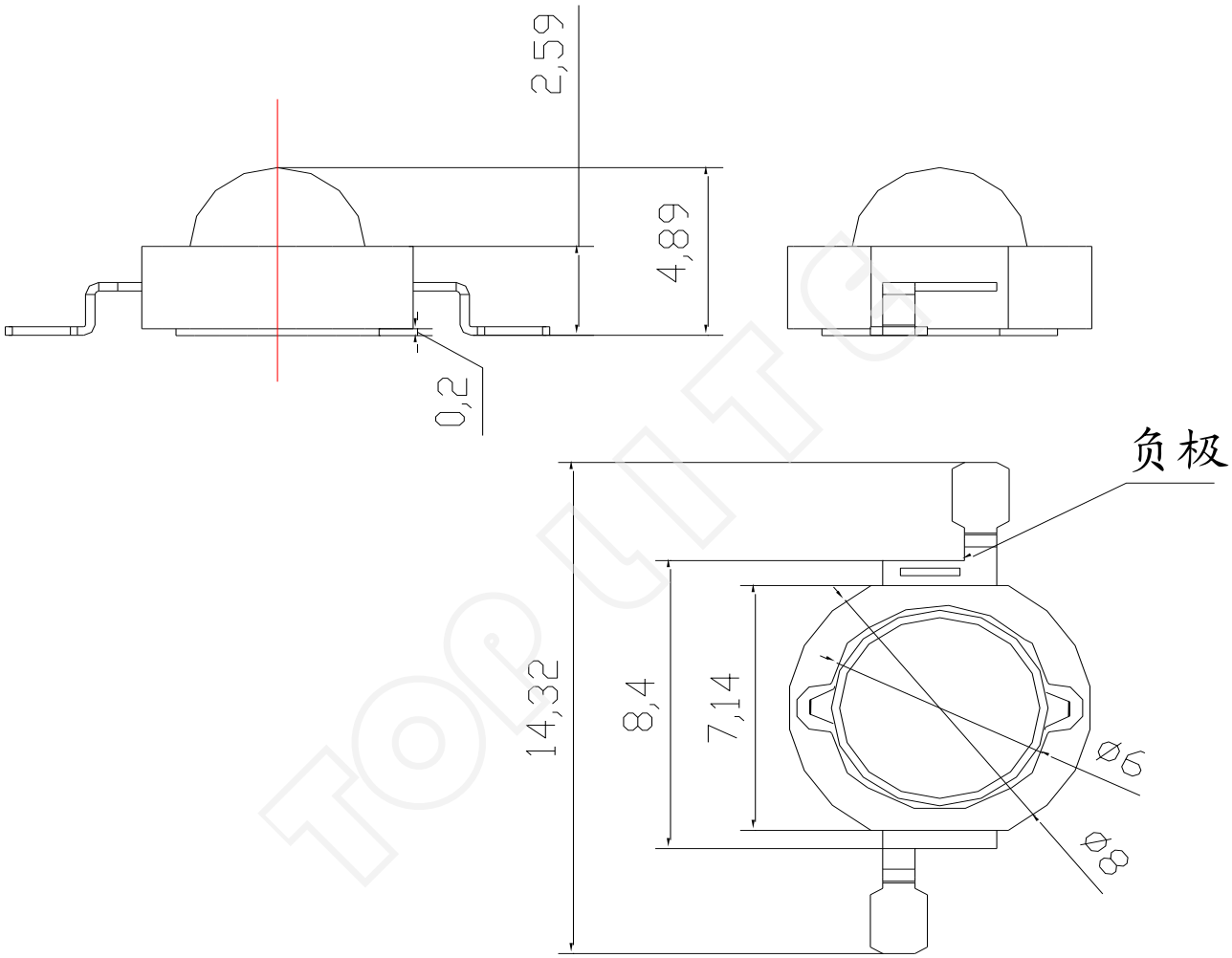
※ Decorative and Entertainment Lighting

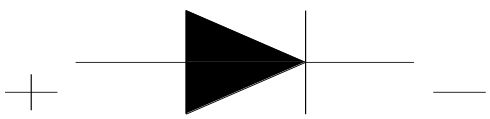
※ Exterior and Interior Automotive Illumination

※ Agriculture Lighting

PART NO.	Size	Flux average (lm)	Drive Current (mA)
TOP-HR511B-SA-1W	/	15	350

4. PACKAGE DIMENSIONS & CIRCUIT DIAGRAM





5. ELECTRICAL/OPTICAL CHARACTERISTIC

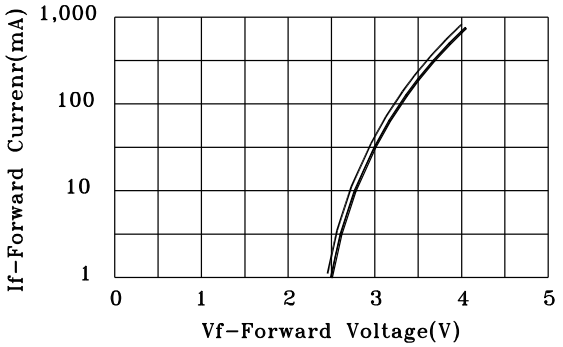
5-1. ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

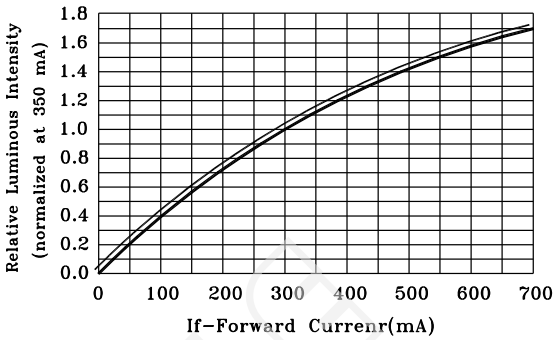
PARAMETER PER SEGMENT	SYMBOL	MAX	UNIT
Reverse Voltage	V_R	5	V
DC Forward Current	I_F	350	mA
Peak Forward Current (1/10 Duty Cycle)	I_{PEAK}	1000	mA
Power Dissipation	P_D	1.2	W
Soldering iron temperature (lead-free)	Tsol	375	℃
Soldering time	t	3	SEC.
Soldering iron power	P	≤60	W
Operating Temperature Range	T_A	- 40 ~ + 85	℃
Storage Temperature Range	T_{STG}	- 40 ~ + 85	℃
Solder Temperature 1/16 inch below seating plane for 3 seconds MAX 260℃			

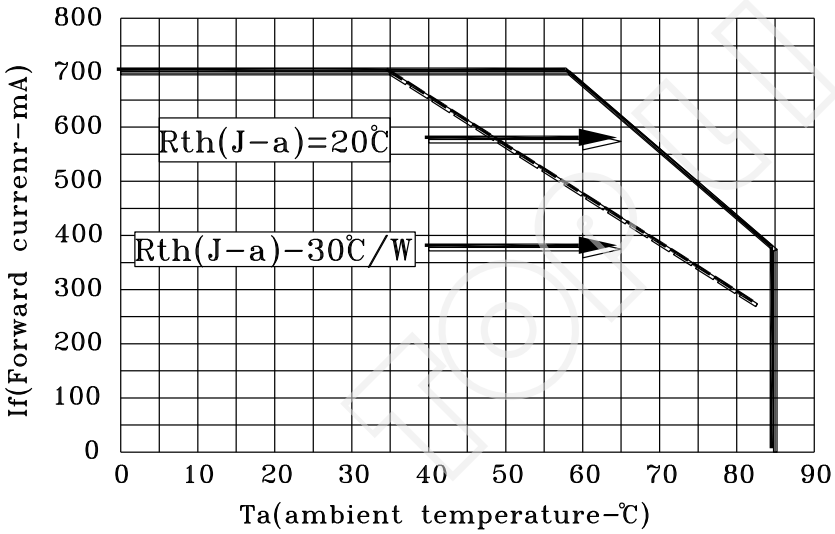
5-2. ELECTRICAL/OPTICAL CHARACTERISTICS (Ta=25℃)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_F	3.00	3.30	3.60	v	I_F=350mA
Luminous Flux	I_V	-	15	-	lm	
CRI	Ra	-	75	-	-	
CCT	Tc	-	-	-	K	
Peak Emission Wavelength	λ_p	460	-	465	nm	
Spectral Line Half-Width	$\Delta\lambda$	-	30	-	nm	
Reverse Current	I_R	-	-	10	uA	V_R=5v

5-3. ELECTRICAL/OPTICAL CHARACTERISTIC CURVES







6. QUALITY CONTROL AND ASSURANCE

CLASSIFICATION	TEST ITEM	DESCRIPTION AND TEST CONDITION
ENDUTRANCE TEST	OPERATION LIFE	To evaluate resistance of the device when it operated at eletrical stress Ta=under room temperature If=12mA-25mA per segment or Ip=80mA/duty=1/8,Pw=1.25mS Ip=160mA/duty=1/16,Pw=1.mS(DOT) Test time=1000HRS(-24HRS+72HRS)
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	To evaluate moisture resistance of the device when it stored for a long term at high temperature and high humidity Ta=65℃ ±5℃ RH=90-95% Test time=240HRS ±2HRS
	HIGH TEMPERATURE HIGH HUMIDITY REVERSE BIAS	To evaluate resistance of leakage current against long term thermal,humidty,and eletrical strss Ta=65℃ ±5℃ RH=90-95% VR=5V Test time=500hrs(-24HRS+48HRS)
	HIGH TEMPERATURE STORAGE	To evaluate device's durability for long term storage in high temperature Ta=85℃ ±5℃ Test time=1000HRS(-24HRS+72HRS)
	LOW TEMPERATURE STORAGE	To evaluate device's durability for long tem storage in low temperature Ta=-35℃ ±5℃ Test time=1000HRS(-24HRS+72HRS)
ENVIRONMENTAL TEST	TEMPERATURE CYCLING	To evaluate resistance of devices under thermal stress,expansion and contraction Ta=85℃～25℃～-35℃ time=30min 5min 30min 5min Cycle test:10cycles
	THERMAL SHOCK	To evaluate device's structrual and mechanical resistance when suddenly exposed at serious changes Ta=85℃ ±5℃～-35℃ ±5℃ time=10min 10min Cycle test:10cycles
	SOLOER RESISTANCE	To evaluate resistance of thermal stress caused by soldering T.sol=260℃ ±5℃ time=10 ±1sec
	SOLOER ABILITY	To evaluate solderability on leads of device T.sol=230℃ ±5℃ time=5 ±1sec