Snowdragon Industrial Co.,Ltd

DATA SHEET

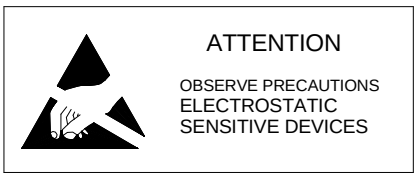
MODEL No : SD-FB3AF3-S

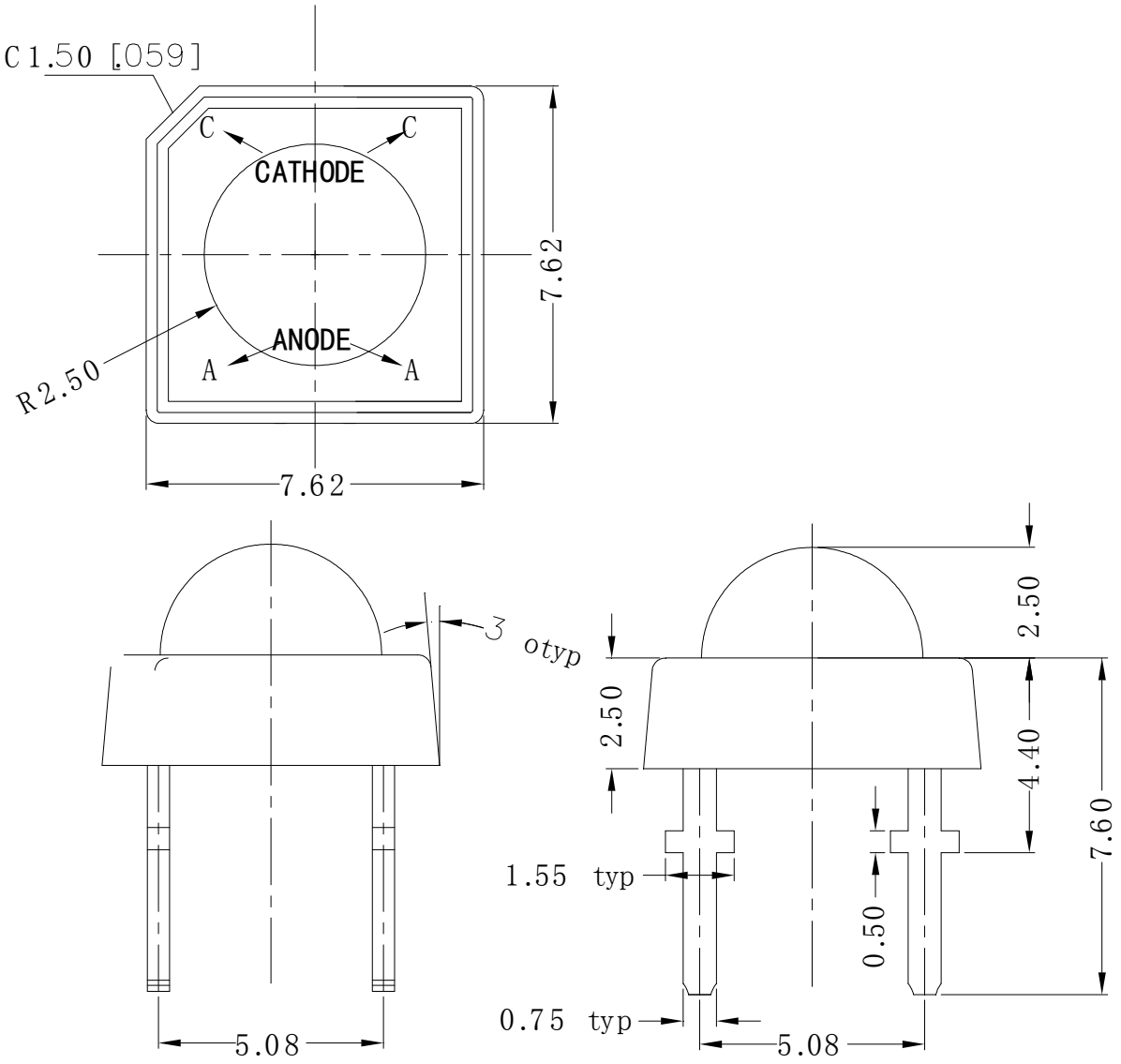
ENG. No:

Description:

- **5mm High Flux led**
- **Lens Color: Water Clear**
- **Emitting Color: Blue**
- **Viewing Angle :70˚**
- **With Stopper**

PREPARED BY	CHECKED BY	APPROVED BY
CUSTOMER APPROVED SIGNATURES		





Note:

1. All Dimensions are in millimeters

2. Tolerance is ±0.25mm(0.010") Unless otherwise specified.

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Max	Unit
Power Dissipation	P_D	100	mW
Continuous Forward Current	I_F	40	mA
Derating Linear From 50℃	V_R	0.4	mA /℃
Reverse Voltage	V_R	5	V
Operating Temperature Range	Topr	-25℃ to+80℃	
Storage Temperature Range	Tstg	-25℃ to+100℃	
Lead Soldering Temperature 【4mm From Body】	Tsol	260℃ For 5 Seconds	

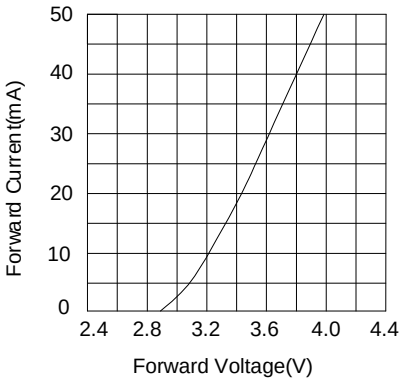
Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Forward Voltage	VF	2.9	3.3	3.5	V	If=20mA
Luminous Intensity	IV	1500	2000	----	mcd	IF=20mA
Dominant Wavelength	λd	465	470	475	nm	If=20mA
Spectral Line Half-Width	△λ	---	30	---	nm	If=20 mA
Reverse Current	IR	---	---	10	mA	VR=5V
Viewing Angle	$2\theta_{1/2}$	---	70	---	deg	If=20mA

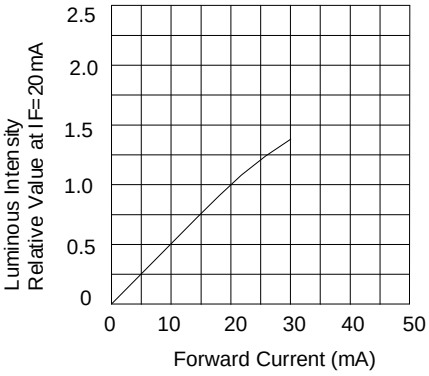
5mm Hihg Flux Blue LEDs

LED LAMP ELECTRONIC/OPTICAL CHARACTERISTICS CURVE

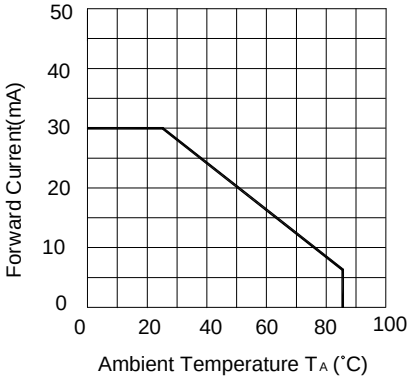
FORWARD CURRENT Vs.
FORWARD VOLTAGE



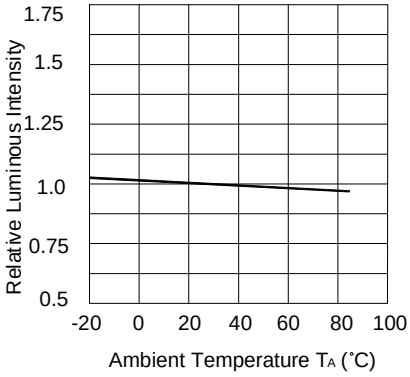
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



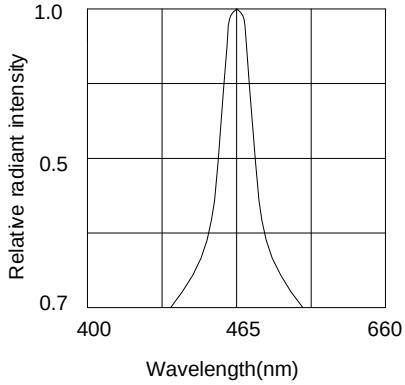
FORWARD CURRENT
DERATING CURVE

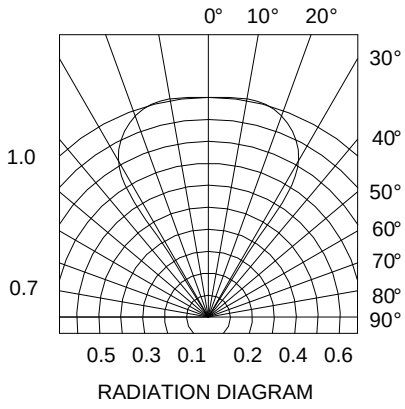


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



RELATIVE RADIANT INTENSITY
VS. WAVELENGTH





LED Lamp Reliability test standard

Type	Test Item	REF. Standard	Test conditions		Note	Number of Damaged
			Binary / Trinary Chip	Quaternary Chip		
Environments Sequence	Temperature Cycle	JIS C7021 (1977)A4	-20℃~25℃~80℃~25℃ 30min,5min,30min,5min	-40℃~25℃~100℃~25℃ 30min,5min,30min,5min	100 cycles	0/100
	Thermal shock	MIL-STD-202G	-20℃~80℃ 30min, 30min	-40℃~100℃ 30min, 30min	100 cycles	0/100
	High Temperature Storage(*)	JIS C7021 (1977)B10	Ta=80℃	Ta=100℃	1000Hrs	0/100
	Low Temperature Storage	JIS C7021 (1977)B12	Ta=-30℃	Ta=-40℃	1000Hrs	0/100
Operation Sequence	Life test	JIS C7035 (1985)	Ta=25℃ If=25mA	Ta=25℃ If=25mA	1000Hrs	0/100
	High humidity Heat life test	------	60℃ RH=90% If=20mA	60℃ RH=90% If=20mA	500Hrs	0/100
	Low temperature Life test	------	Ta=-20℃ If=20mA	Ta=-30℃ If=20mA	1000Hrs	0/100
Destructive Sequence	Resistance to solderingHeat	JIS C7021 (1977)A11	Tsol=260±5℃ ,10sec. (3mm from the base of the epoxy bulb)		1 time	0/20
	Solder ability	JIS C7021 (1977)A2	Tsol=235±5℃ ,5sec. (using flux)		1 time (over95 %)	0/20
	Lead Pull/Bend Test	JIS C7021 (1977)A11	Load 2.5N(0.25kgf) 0℃~90℃~0℃;Bend 3times		3 time	0/10
ESD Test	ESD TEST	AEC (Q101002)	Human body model 1000v		-----	0/10

Items marked with * are selective.

Failure Criteria

Item	Symboi	Test Condition	Criteria for Judgment	
			min	Max
Forward Voltage	VF	IF = 20 mA	------	Initial Data x 1.1
Reverse Current	IR	VR = 5 V	-----	100 A
Luminous Flux/Intensity	/IV	IF = 20 mA	Initial Data x 0.7 (Total degradation) Initial Data x 0.5 (Single lamp degradation)	------