



[www.snowdragonledhk.com](http://www.snowdragonledhk.com)

Good quality & Fast delivery

## Snowdragon Industrial Co.,Ltd

### DATA SHEET

MODEL No : **SDL518WCU-0-CM-C**

ENG. No: **09041503**

Description:

- 5mm Helmet
- Lens Color: Water clear
- Emitting Color: White
- No Stopper
- Viewing Angle :110°

DiceMaterial: InGaN

PREPARED BY	CHECKED BY	APPROVED BY
<b>CUSTOMER APPROVED SIGNATURES</b>		

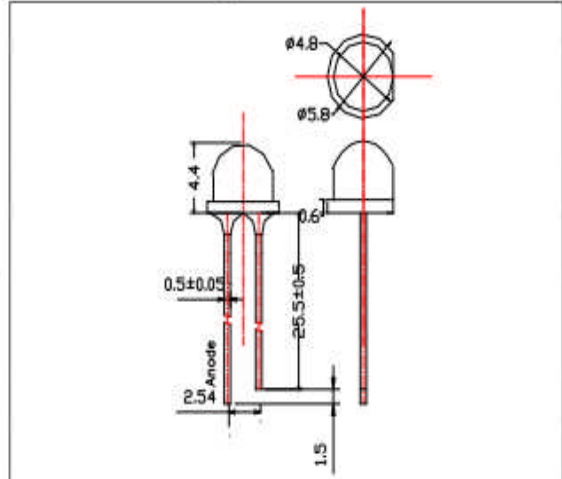


**Applications:**

**Dimension Drawing**

**Absolute Maximum Ratings at Ta = 25°C**

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	$I_F$	25	mA
Peak Forward Current*	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	100	mW
Operation Temperature	$T_{opr}$	-20 ~ +75	°C
Storage Temperature	$T_{stg}$	-30 ~ +80	°C
Lead Soldering Temperature	$T_{sol}$	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	



**Notes:**

1. All dimensions are in mm, Tolerance is  $\pm 0.25$ mm unless others noted
2. An epoxy meniscus may extend about 1.5mm
3. Burr around bottom of epoxy may be 0.5mm max.

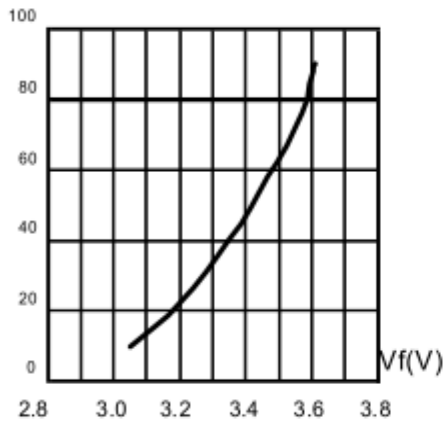
\*pulse width  $\leq 0.1$ msec duty  $\leq 1/10$

**Typical Electrical & Optical Characteristics ( Ta = 25°C)**

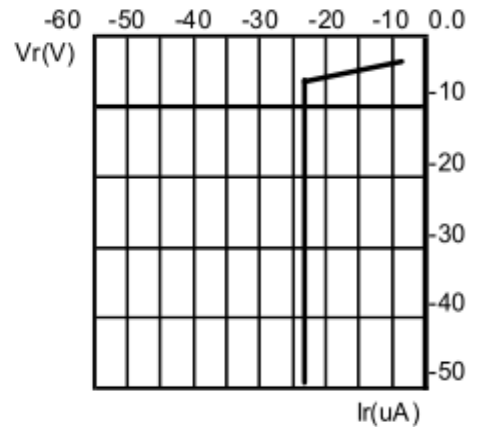
Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F = 20$ mA	2.8	3.2	3.6	V
Reverse Current	$I_R$	$V_R = 5$ V	---	---	10	$\mu$ A
Wavelength	CCT	$I_F = 20$ mA	---	7500	---	k
Luminous Intensity	$I_V$	$I_F = 20$ mA	--	2000	---	mcd
50% Power Angle	$2\theta_{1/2H-H}$	$I_F = 20$ mA	--	110	---	deg
	$2\theta_{1/2V-V}$	$I_F = 20$ mA	---	---	---	deg

Rank	Luminous Intensity(mcd)	Rank	Luminous Intensity(mcd)	Rank	Luminous Intensity(mcd)
/	/	/	/	/	/

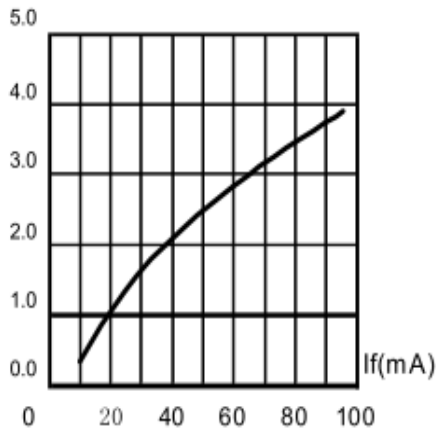
**Typical Optical-Electronic Characteristic Curves**



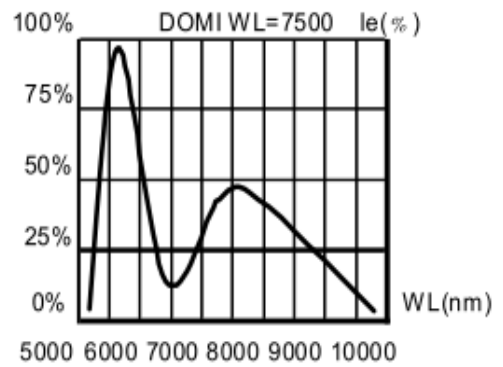
**Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.**



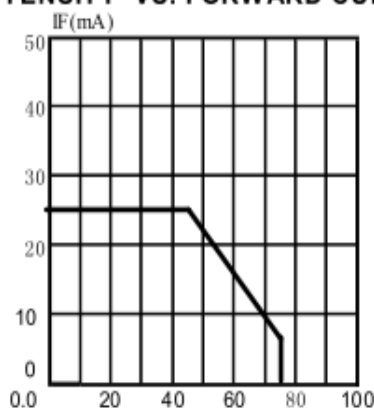
**Fig.2 REVERSE CURRENT VS. REVERSE VOLTAGE.**



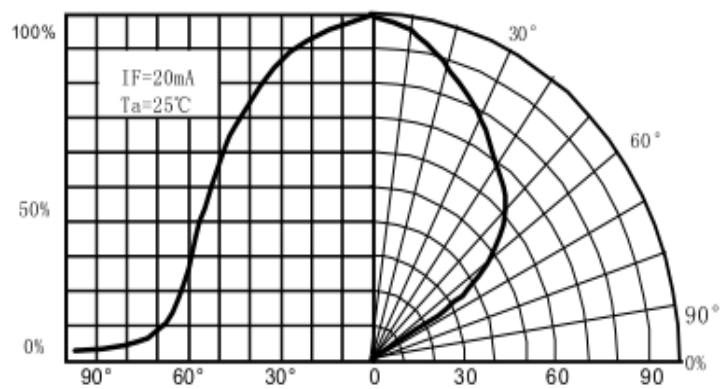
**Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.**



**Fig.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.**



**FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{imax}=105^{\circ}C$ )**



**Fig.6 FAR FIELD PATTERN**

## 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

### Failure Criteria

Item	Symbol	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)	
				-----