

Spec No.	NPS071016
Rev.	01

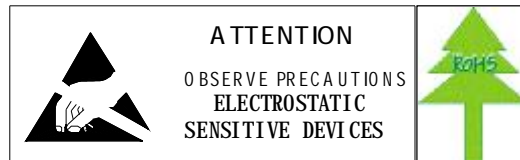


# PRODUCT SPECIFICATION

Model No: SCL-UV400-405

Descriptions:

- 5mm Standard Type
- Emitting Color: InGaN **Purple**
- Viewing Angle: 20°
- Lens Color: Water Clear
- No Stopper

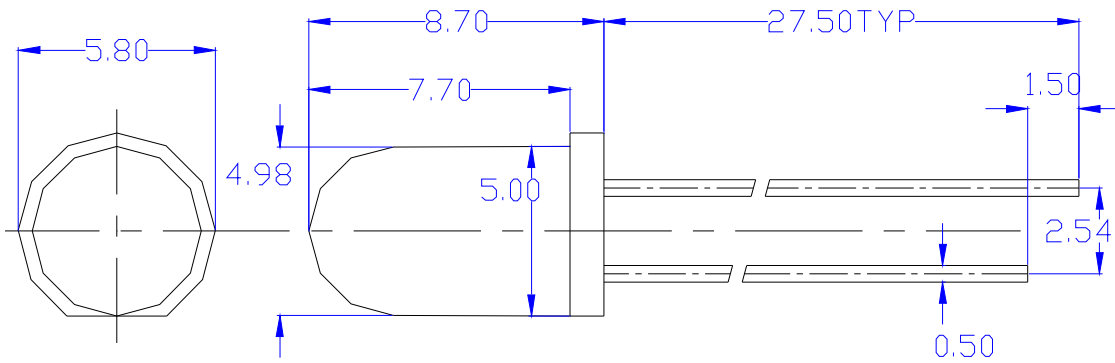


CUSTOMER APPROVED SIGNATURES

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■ Package Dimensions

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**Package Dimensions**

Notes:

1. All dimensions in mm tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.
2. An epoxy meniscus may extend about 1.5mm down the leads.
3. Burr around bottom of epoxy may be 0.5mm max.

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	3.4	3.6	3.8	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	---	---	10	$\mu\text{A}$
Dominant Wavelength	$\lambda_p$	$I_F = 20\text{mA}$	400	---	405	nm
Power	$I_e$	$I_F = 20\text{mA}$	5.0	6.0	7.0	mW
50% Power Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	---	20	---	Deg

**Absolute Maximum Ratings (Ta = 25°C)**

Items	Symbol	Absolute maximum Rating	Unit
Power Dissipation	$P_D$	70	mW
Forward Current(DC)*2	$I_F$	30	mA
Peak Forward Current*1	$I_{FP}$	100	mA
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)	

\*1Pulse width  $\leq 0.1\text{msec}$  duty  $\leq 1/10$

\*2For long term performance the drive currents between 10mA and 30mA are recommended.

\*3Please contact SenChuang sales representative for more information on recommended drive conditions

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**Typical Electrical/ Optical Characteristics Curves**  
(Ta=25°C Unless Otherwise Noted)

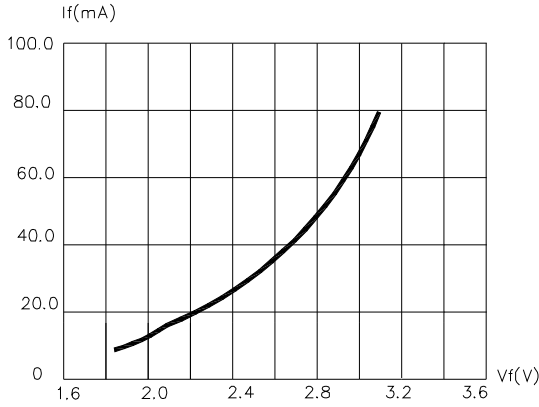


Fig.1 Forward Current vs. Forward Voltage

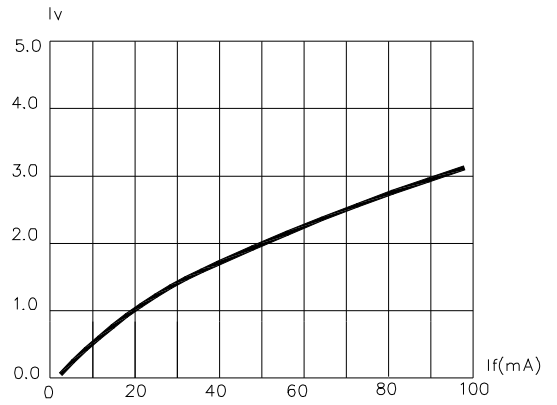


Fig.2 Relative Luminous Intensity vs. Forward Current

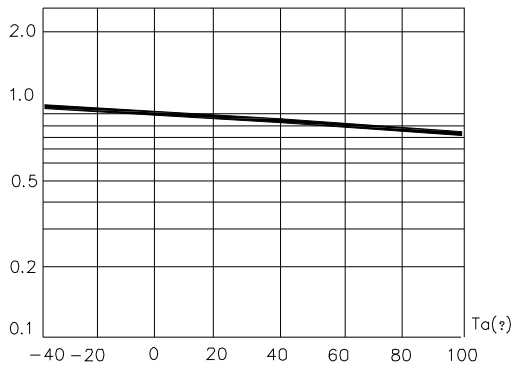


Fig.3 Relative Luminous Intensity vs. Ambient Temperature

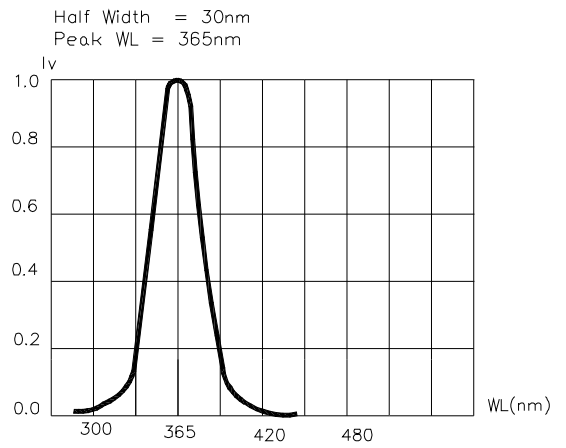


Fig.4 Relative Luminous Intensity vs. Wavelength

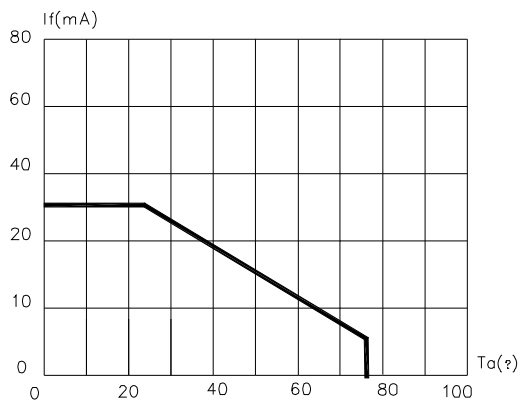


Fig.5 Maximum Forward Current vs. Ambient Temperature

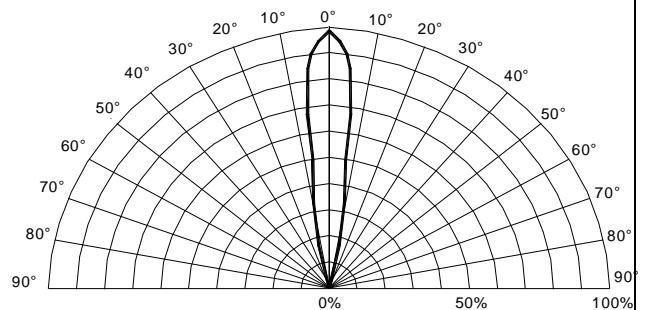


Fig.6 Relative Luminous Intensity vs. Radiation Angle

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■ Reliability

1. Test Items And Results

Test Item	Standard	Test Conditions	Note	Number of Damaged
Resistance to soldering Heat	JEITA ED-4701 300 302	Ta=260±5°C 5sec 3mm from the base of the epoxy bulb	1 time	0/22
Solderability	JEITA ED-4701 300 303	Ta=235±5°C 5sec	1 time over 95%	0/22
Mechanical Strength of Terminal (bent Test)	JEITA ED-4701 400 401	Load 5N(0.5kgf) 0°~90°~0°bond 3 times	No noticeable damage	0/22
Mechanical Strength of Terminal (pull Test)	JEITA ED-4701 400 401	Load 10N (1kgf) 10±1sec	No noticeable damage	0/22
Heat shock	JEITA ED-4701 300 307	0°~100° 15min 15min	100cycles	0/22
Temperature cycle	JEITA ED-4701 100 105	-40°C~25°C~100°C~25°C 30min 5min 30min 5min	100 cycles	0/22
Steady State Operating Life		Ta=60° RH=85% IF=20mA	500hrs (168,500)	0/22
High Temperature Storage	JEITA ED-4701 200 201	Ta=100°C	1000hrs (168,500,1000)	0/22
Temperature Humidity Storage	JEITA ED-4701 200 202	Ta=60°C RH=85%	1000hrs (168,500,1000)	0/22
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40°C	1000hrs (168,500,1000)	0/22
Life Test		Ta=25°C IF=20mA	1000hrs (168,500,1000)	0/22
Low Temperature Life Test		Ta=-40°C IF=20mA	500hrs (168,500)	0/22

2. Criteria for Judging The Damage

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min.	Max.
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20 mA	---	Initial Data ×1.1
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =20 mA	Initial Data × 0.5	---
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	≤ 10 μA

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**■ Warranty:**

1. SenChuang warrants that its LEDs conform to the foregoing specifications and that SenChuang will convey good title to all LEDs sold.
2. In the event any LED supplied by SenChuang is found not to conform to the foregoing specifications within ninety days of receipt. SenChuang will repair or replace the LED, at SenChuang's option, provided that user
  - a) promptly notifies SenChuang in writing of the details of the defect
  - b) ships the LED at user's expense to SenChuang for examination, and the defect is due to the negligence of SenChuang and not mishandling or misuse by user.
3. SenChuang cannot take any responsibility for any troubles that are caused by using the LEDs at conditions exceeding our specifications.
4. These specifications are applied only when a LED stands alone and it is strongly recommended that the user of the LED confirms the properties upon assembly. SenChuang is not responsible for failures caused during and after assembling.
5. A claim report stating details about the defect shall be made when returning defective LEDs. SenChuang will investigate the report immediately and inform the user of the results.
6. These LEDs are designed and manufactured for standard applications such as electric home appliances, communication equipment, office equipment, electronic instrumentation and so on. It is recommended to consult with SenChuang in advance if user's application requires any particular quality or reliability that concerns human life. Examples would be medical equipment, aerospace applications, traffic signals, safety system equipment and so on.
7. SenChuang's liability for defective lamps shall be limited to replacement and in no event shall SenChuang be liable for consequential damages or lost profits.
8. Both SenChuang and the user confirm that any agreement regarding the quality is based only on the specifications herein. The agreement confirmed before this specifications shall become ineffective if it is not stated in these specifications.
9. Both parties shall sincerely try to find a solution when any inconvenience is found in these specifications.
10. These specifications can be revised on mutual agreement.
11. SenChuang understands that user accepts the content of this specification, if user does not return these specifications with your signature within 3 weeks after your receipt.