

SPL300CUV405

3mm dome 405nm Ultraviolet High-Flux LEDs
55° viewing angle

DWG BY:
BLE / JAG
04-20-06

CHK BY:
PL
06-06-06

QA:
GZ
06-07-06

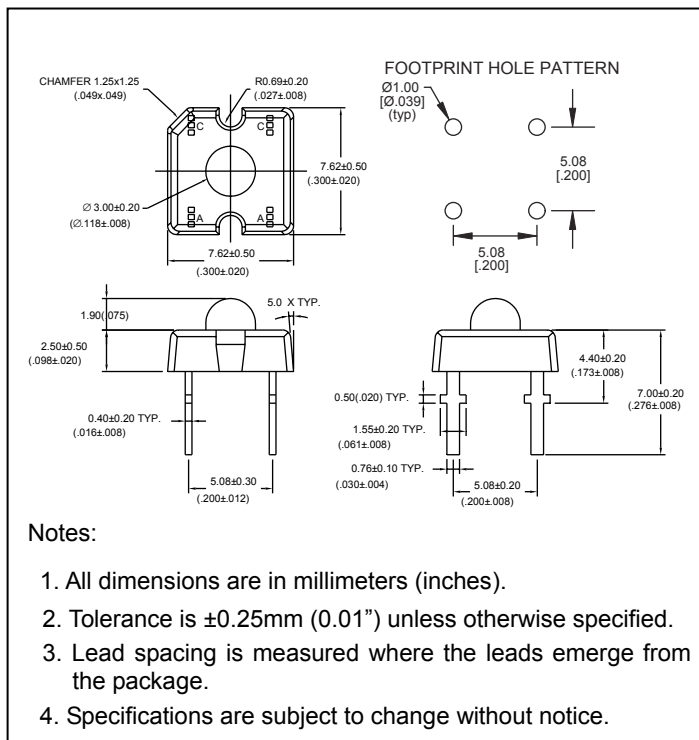
MFG:
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REVISION LTR: -
04-20-06

• **Package dimensions**

• **Features:**

1. Chip material: InGaN / SiC
2. Emitted color: Ultraviolet
3. Lens Appearance: Water Clear
4. High current operation
5. High flux output
6. Low thermal resistance
7. Low profile
8. Wide viewing angle
9. Meets SAE/ECE/JIS automotive color requirements
10. Tube package for automatic loading and insertion processes
11. This product does not contain restricted substances, complies with ROHS standards



• **Applications:**

1. TV sets
2. Monitors
3. Telephones
4. Computers
5. Circuit boards

! CAUTION

- This UV LED during operation radiates intense UV light.
- Do not look directly into the UV light during operation of device. This can be harmful to the eyes even for brief period due to the intense UV light.
- If viewing the UV light is necessary, please use UV filtered glasses to avoid damage by the UV light.
- If the UV LED in your product might be viewed directly, please affix a caution label to your product to that effect.

Avoid direct eye exposure to UV light.
Keep out of reach of children.

• **Absolute maximum ratings (Ta=25°C)**

Parameter	Symbol	Rating	Unit
Power Dissipation	P _d	120	mW
Forward Current	I _F	30	mA
Peak Forward Current* ¹	I _{FP}	150	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40°C~80°C	
Storage Temperature	T _{stg}	-40°C~85°C	
Soldering Temperature	T _{sol}	260°C (for 5 seconds)	

*¹Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

• **Electrical and optical characteristics (Ta=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20mA$	-	3.2	4.0	V
Luminous Intensity	I_V	$I_F=20mA$	4	9	-	mcd
Reverse Current	I_R	$V_R=5V$	-	-	100	μA
Peak Wavelength	λ_p	$I_F=20mA$	398	400	404	nm
Dominant Wavelength	λ_d	$I_F=20mA$	410	420	425	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20mA$	-	16	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20mA$	45	50	55	deg
SCP		$I_F=20mA$	-	-	-	cd
Lumens		$I_F=20mA$	-	-	-	lm
Radiant Intensity		$I_F=20mA$	6,500	13,000	20,000	$\mu W/sr$
Chromaticity Coordinates	X	$I_F=20mA$	-	0.17	-	
	Y	$I_F=20mA$	-	0.006	-	

• **Typical electro-optical characteristics curves**

Fig.1 Relative intensity vs. Wavelength

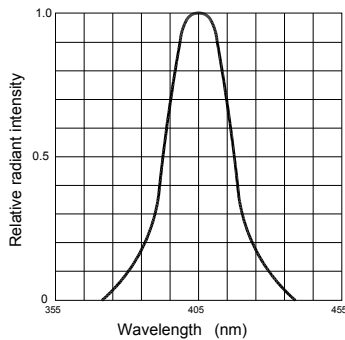


Fig.2 Forward current derating curve vs. Ambient temperature

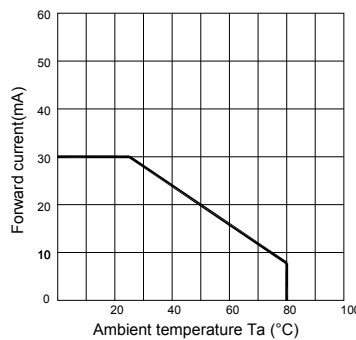


Fig.3 Forward current vs. Forward voltage

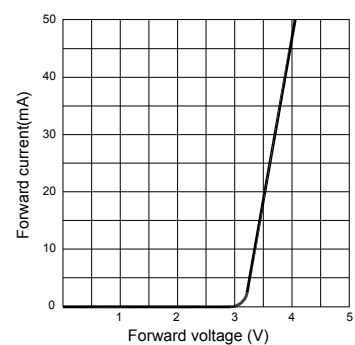


Fig.4 Relative luminous intensity vs. Ambient temperature

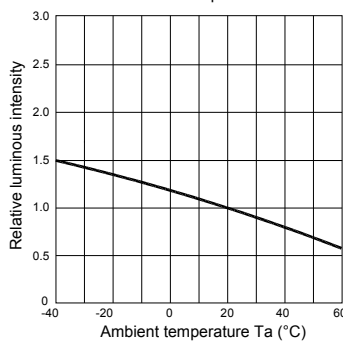


Fig. 5 Relative luminous intensity vs. Forward current

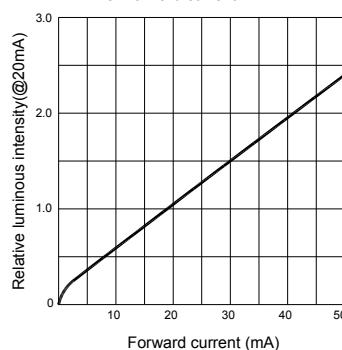
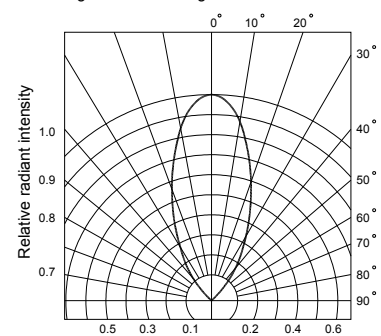


Fig.6 Radiation diagram



• **Bin Limits**

1. Intensity Bin Limits (At $I_F=20\text{mA}$)

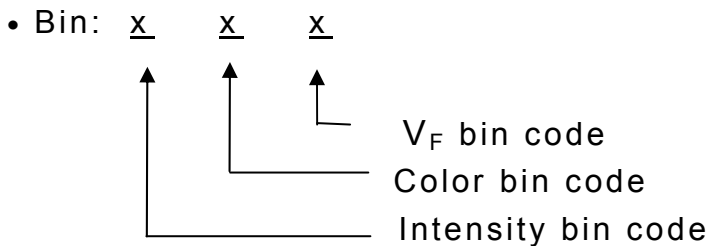
Bin Code	Min. (mcd)	Max. (mcd)
B	0.4	0.8
C	0.6	1.2
D	0.9	1.8
E	1.4	2.8
F	2.1	4.2
G	3.8	7.2
H	6.8	10.2

2. Color Bin Limits (At $I_F=20\text{mA}$): Dominant Wave Length λ_d (nm)

Bin Code	Min. (nm)	Max. (nm)
5	409	416
6	414	421
7	421	425

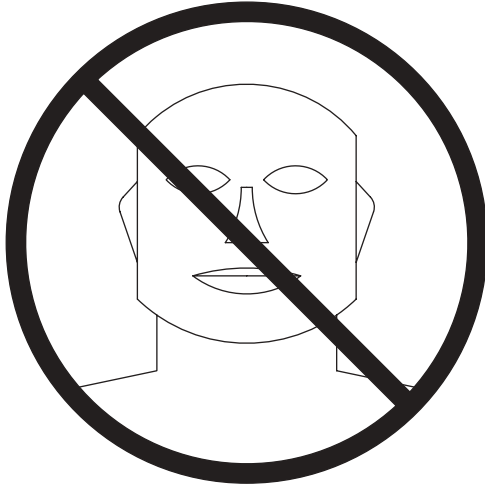
3. V_F Bin Limits (At $I_F=20\text{mA}$)

Bin Code	Min. (v)	Max. (v)
G	2.75	3.05
H	2.95	3.25
J	3.15	3.45
K	3.35	3.65
L	3.55	3.85
M	3.75	4.05

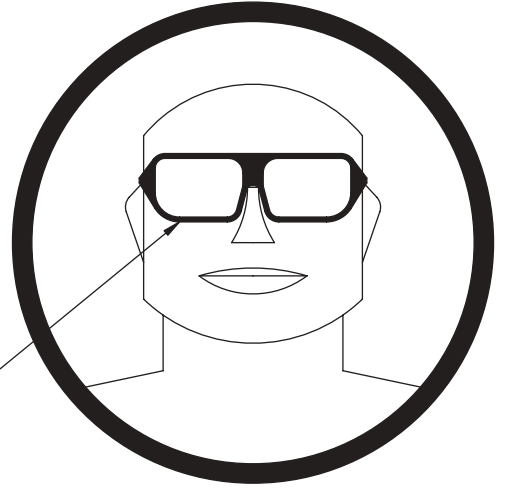


LTR	REVISION	DATE	APPD
-	RELEASED	03-10-00	JCH

ULTRAVIOLET LIGHT SAFETY PROCEDURE



INSPECTORS AND OTHER
PERSONS VIEWING
ULTRAVIOLET LIGHT **MUST**
WEAR PROPER PROTECTIVE
EYEWEAR



WILLSON UV GLASSES
PART # F117501

	<h2>CAUTION</h2>
	<ul style="list-style-type: none"> ◦ This UV LED during operation radiates intense UV light. ◦ Do not look directly into the UV light during operation of device. This can be harmful to the eyes even for brief period due to the intense UV light. ◦ If viewing the UV light is necessary, please use UV filtered glasses to avoid damage by the UV light. ◦ If the UV LED in your product might be viewed directly, please affix a caution label to your product to that effect. <p style="text-align: center;">Avoid direct eye exposure to UV light. Keep out of reach of children.</p>

NORMAL SUNGLASSES WILL NOT
PROTECT YOU FROM UV LIGHT
DAMAGE.

YOU MUST USE THE APPROVED UV
GLASSES

ONLY THOSE PERSONS WHO HAVE COMPLETED UV TESTING
CERTIFICATION ARE TO VIEW THIS PRODUCT

THE SAFETY OF ALL EMPLOYEES IS THE UTMOST CONCERN OF
LEDTRONICS

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LEDTRONICS, INC.[®]
23105 KASHIWA COURT
TORRANCE, CA 90505

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.XXX ± .010 TOLERANCE PER ANSI-Y14.5
.XX ± .025 (UNLESS OTHERWISE STATED)
ANGLES ± 0°;30'
FRACT. ± 1/32

TITLE
UV LIGHT TESTING INSTRUCTIONS

DWG NO	SCALE	SHEET	DATE
QA0028	NTS	1 OF 1	03-10-00
CODE IDENT NO.	DWG BY	CHK BY	QA CG
8Z410	JCH		08-09-00
			MFG RA
			12-01-00
			CUSTOMER