

Specification Sheet: Ultra Violet LED Package

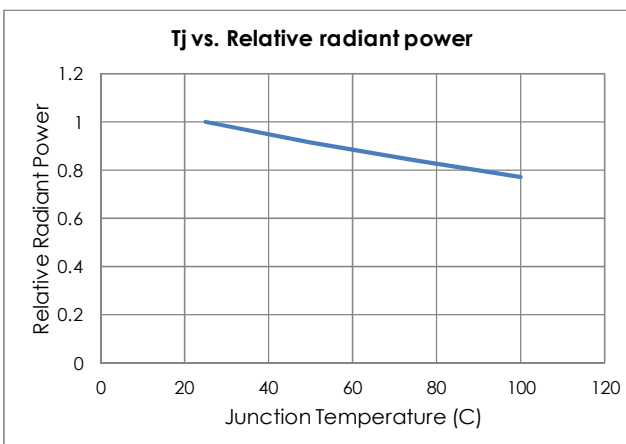
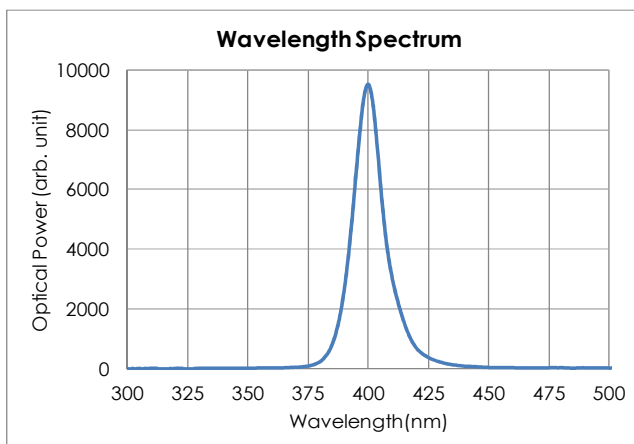
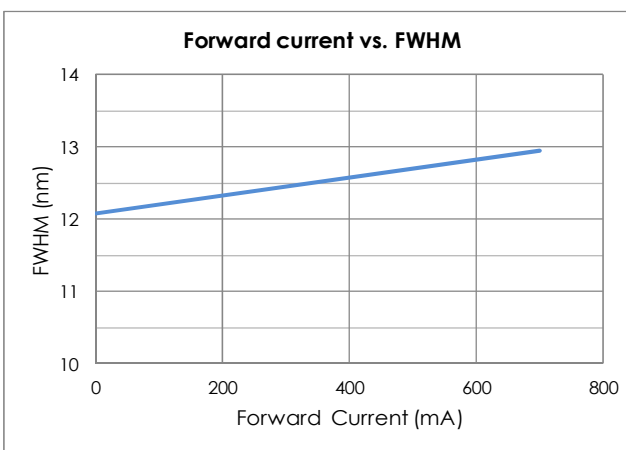
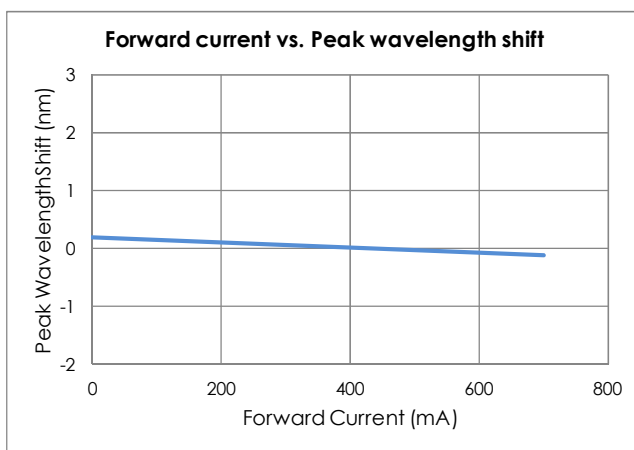
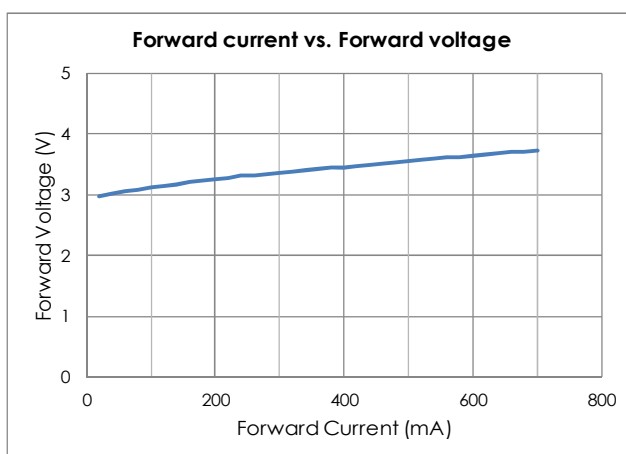
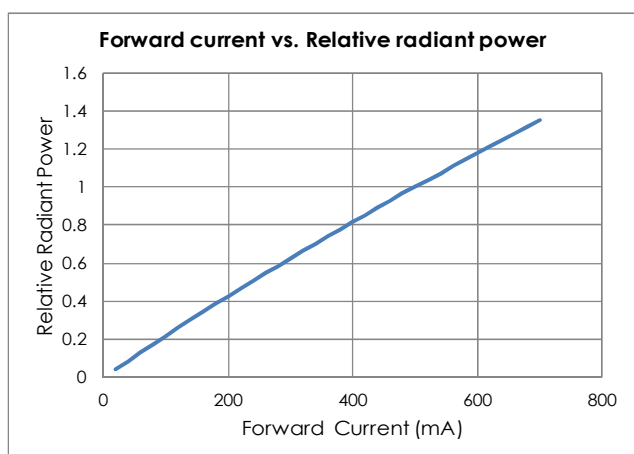
Model: UP814K1-S6P15

Type: L4040C1S3

1) Optical and Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	If=500mA	3.2	3.5	3.8	V
Reverse Voltage	Vr	Ir=-5mA	-	-	7	V
Peak Wavelength	Wp	If=500mA	395	-	405	nm
Optical Power	Φ_e	If=500mA	Refer to Rank Information			
View Angle	$2\theta_{1/2}$	If=500mA		145	-	Deg.

*All samples are tested using Soft-epi Standard Metal PCB (25mmx25mm; t=1.7mm).



2) Rank Information (Bin Table)

Wp (Peak wavelength)		Po (Optical Power)		Vf (Voltage)	
BIN	nm	BIN	mW	BIN	V
UE	370-375	700	700-800	Va	3.0-3.2
UF	375-380	800	800-900	Vb	3.2-3.4
UG	380-385	900	900-1000	Vc	3.4-3.6
UH	385-390	1000	1000-1100	Vd	3.6-3.8
UJ	390-395				
UK	395-400				
UL	400-405				
UM	405-410				

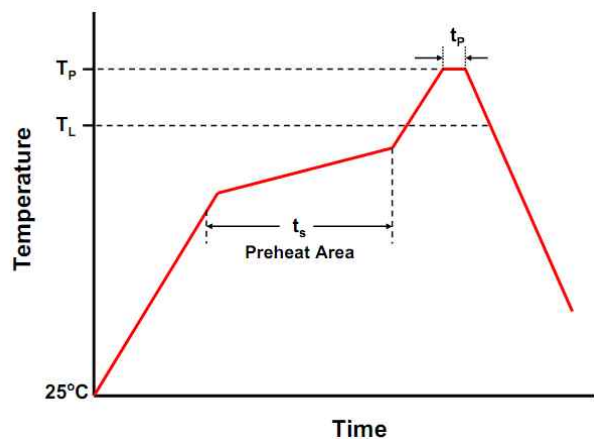
*The above value of optical power (mW) is not calibrated. This value is depends on the measurement equipment.
The bin table could be changed as needed.

3) Absolute Maximum Ratings (Ta=25°C)

Parameters	Symbol	Maximum Value	Unit
Power dissipation (at room temperature)	P_D	1.65	W
DC forward current	I_F	500	mA
Pulse current ; (1/10 duty ratio@1khz)	I_{Fp}	700	mA
Reverse current	$I_r(\text{Max})$	10	μA
Operating temperature	T_{Opr}	-20 ~ +80	°C
Storage temperature	T_{Stg}	-30 ~ +90	°C
Soldering temperature	T_{Sol}	Reflow Soldering : 235°C /20s	°C
Chip junction temperature	T_j	115	°C

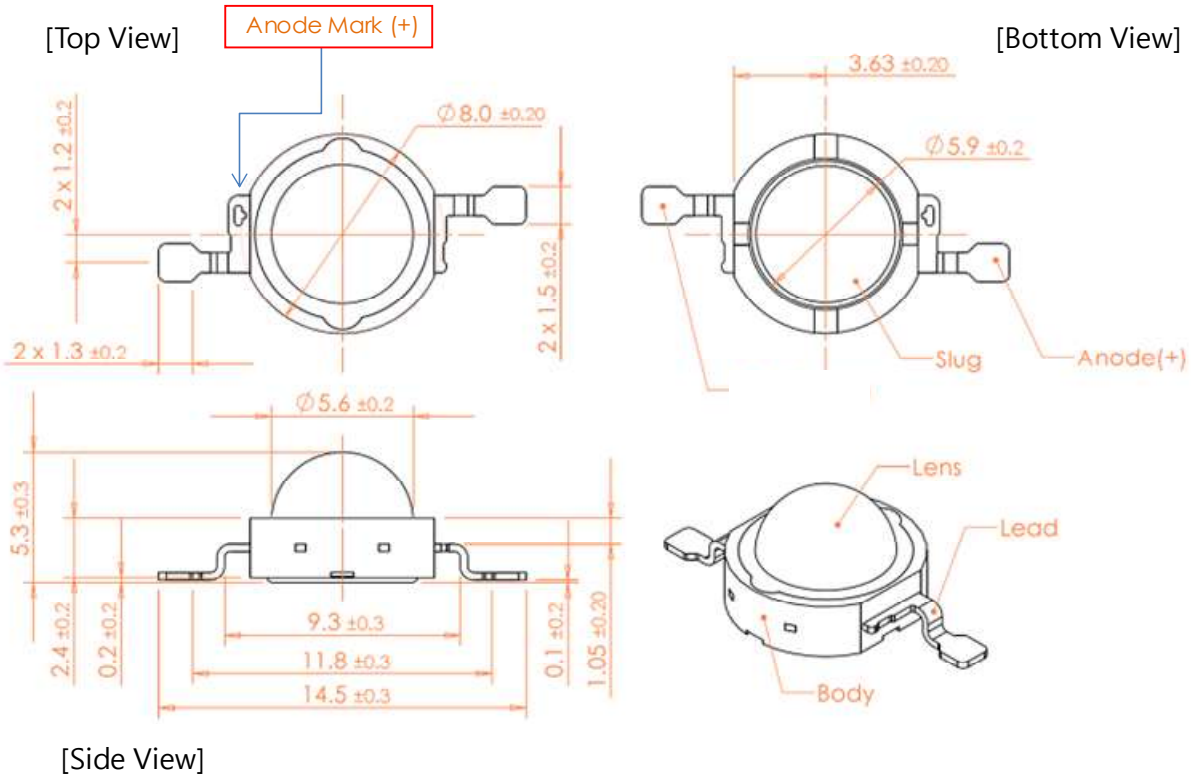
4) Solder Reflow Process

Profile Feature	Lead-free Assembly
Ramp-up Rate	2-3 °C/s
Preheat Temperature	150-200 °C
Preheat Time (t_s)	60-120 s
Liquid Temperature(T_L)	217 °C
Time maintained above T_L	30-60 s
Peak Temperature (T_p)	235±5 °C
Peak Time (t_p)	Max 20 s
Ramp-Down Rate	Max 6 °C/s

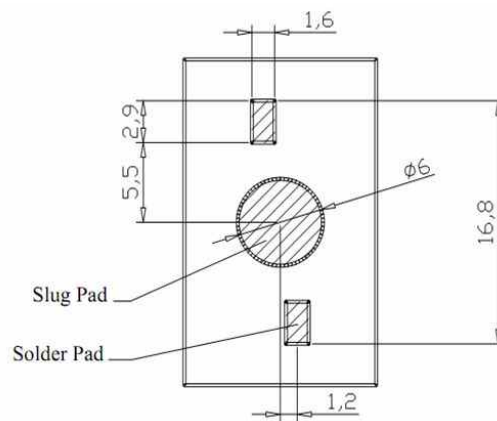


5) Description

A. Package Dimension

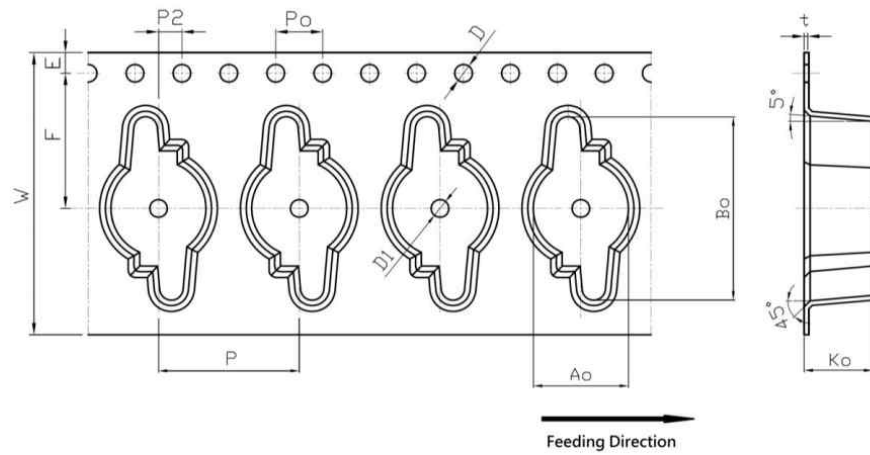


B. Solder pattern



C. Carrier Tape

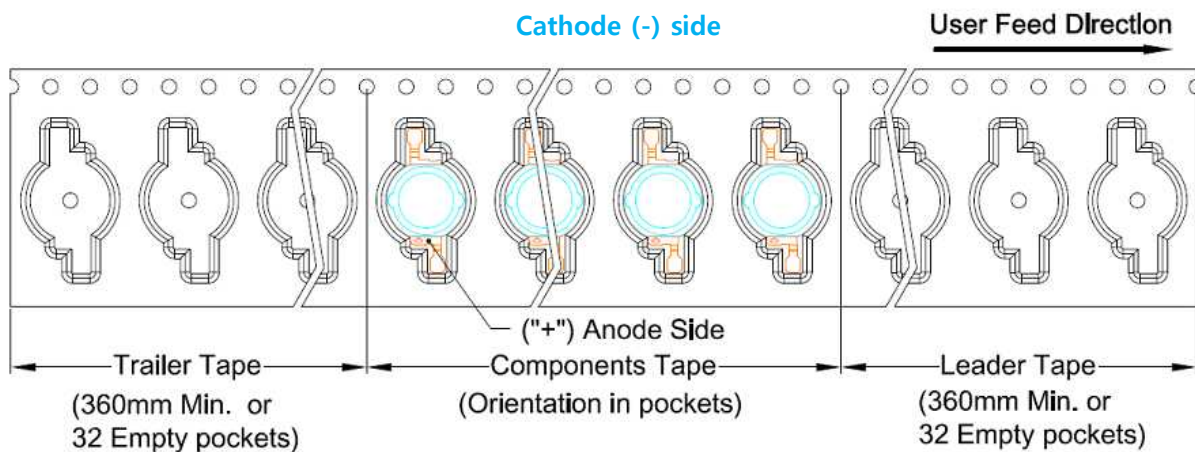
■ CARRIER TAPE DIMENSIONS (2 PINS)



UNIT : mm

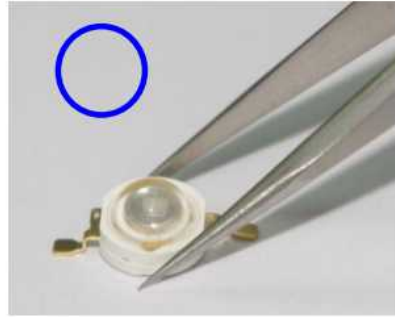
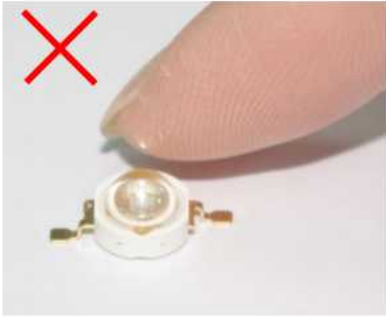
W	P	E	F	P2	D	D1	P0	A0	B0	K0	T
24.0	12.0	1.75	11.5	2.0	1.5	1.5	4.0	8.2	15.6	5.85	0.5
±0.3	±0.1	±0.1	±0.1	±0.1	+0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.05

■ Leader/Trailer and Orientation(2 PINS)

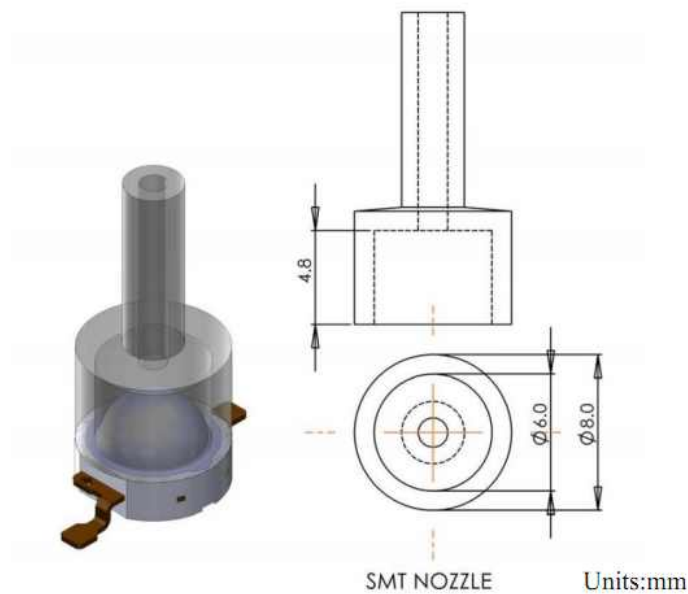


6) Handling Precaution

- Avoid leaving fingerprints or scratches (by sharp tools) on the silicone resin parts.



- **Do not force over 1000mg impact or pressure** on the silicone molding lens.
- The LEDs should only be picked up by making contact with the sides of the LED body.
- In case of pick-and-place nozzle for surface mount assembly, avoid directly contacting the lens with nozzle. The pickup tool was recommended and shown as blows.



7) Caution

- LEDs emit very strong UV radiation.
- Don't look directly into the LED light. UV radiation can harm your eyes.
- To prevent even inadequate exposure, wear protective eyewear.
- If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.