Underdevelopment

940nm Infrared VCSEL

RLD94SAQ6

Datasheet

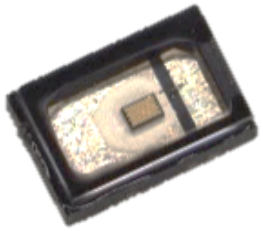
• Application

3D Depth Sensor

TOF Sensor

IR Illumination

Etc.



• Merit

Narrow beam angle

Optical output power 200mW

MSL3 250℃ peak reflow compatible

Thin Package t0.77mm

• Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit	
Continuous Forward Current	If (CW)	300	mA	(Tc=25℃)
Pulse Forward Current 100Hz Duty10% (on time 1ms)	If (Pulse)	500	mA	(Tc=25℃)
Reverse Voltage	Vr	5	V	(Tc=25℃)
Junction temp.	Tj	110	℃	
Solder reflow temp.	Tsr	250(10sec)	℃	
Operating temp.	Top	-20 to 70	℃	
Storage temp.	Tstg	-40 to 85	℃	

Condition : mounted on AL board with Heatsink

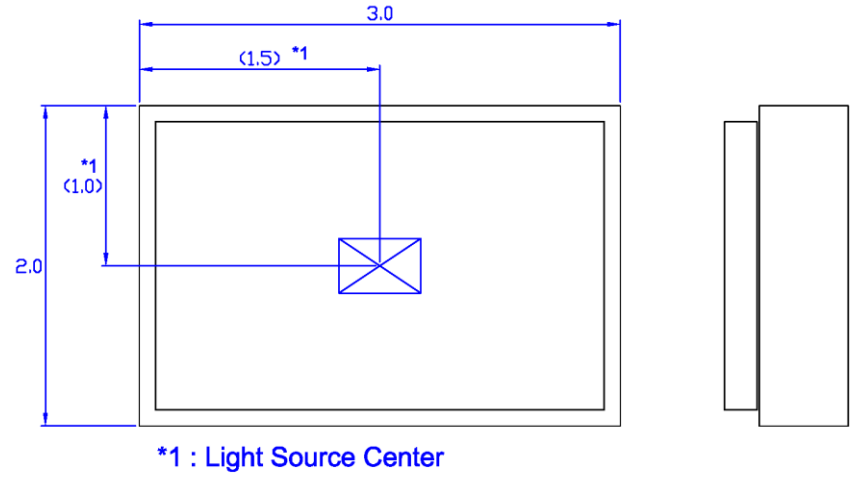
• Characteristics (Ta=25°C)

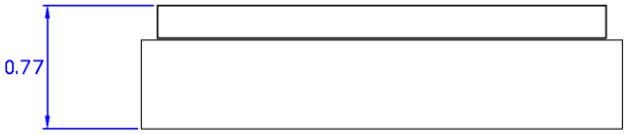
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current	Ith	–	–	70	100	mA
Optical Power	Po	If=300mA (tp=800μsec.)	140	200	260	mW
Forward voltage	Vf	If=300mA (tp=800μsec.)	–	2.0	2.6	V
Beam divergence	FWHM	If=300mA (tp=800μec.)	–	13	–	deg
Conversion efficiency	PCE	If=300mA (tp=800μsec.)	–	33	–	%
Slope efficiency	η	If (100mA to 300mA)	0.5	0.85	1.1	W/A
Peak Wavelength	λp	If=300mA (tp=800μsec.)	930	940	950	nm
λ temp variation	Δλ/ΔT	–	–	0.07	–	nm/℃
ESD damage threshold	ESD HBM	Human Body Model	2000	–	–	V

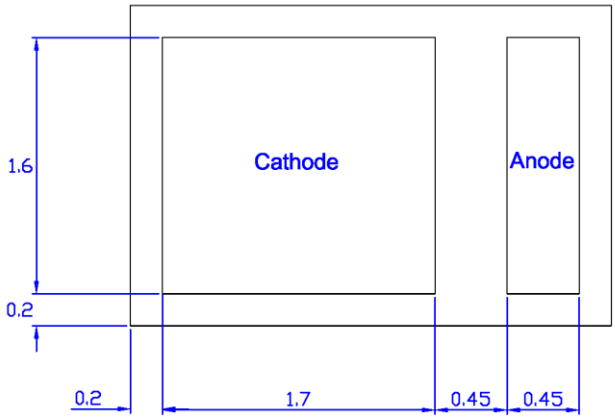
Condition:Ta=25℃ with Heatsink.

Caution:The data above is used as reference only, i.e. not specification guarantee. Specifications and data are subject to change without notice.

●Dimensions





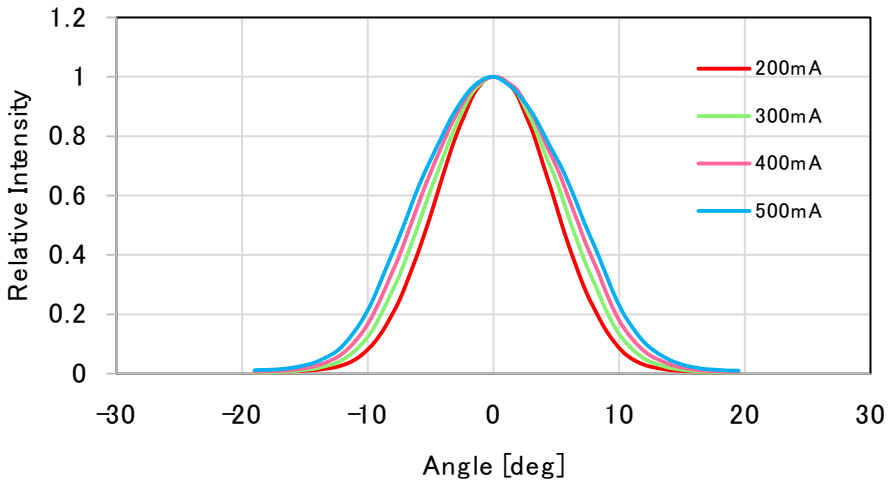


Unit : mm

Note

- Unspecified tolerance shall be ±0.15mm
- Dimensions do not include burrs (Max burr size +0.25mm)

●Beam Divergence Data



Condition : PKG individual piece , Pulse 50kHz Duty50% (on time 10μsec.)

Notes

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