

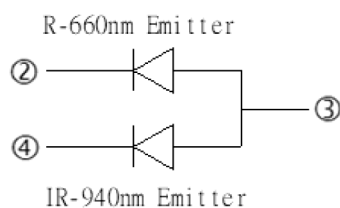
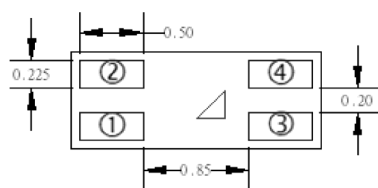
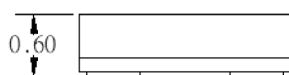
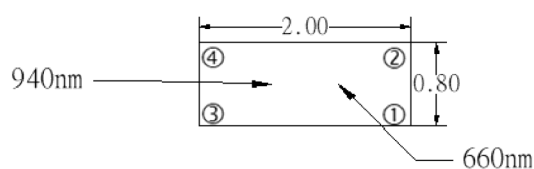
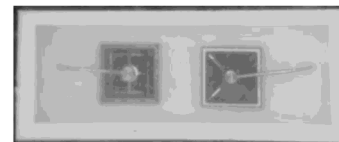
BIO SENSOR LED

P/N: RAU-3460-S000



Feature

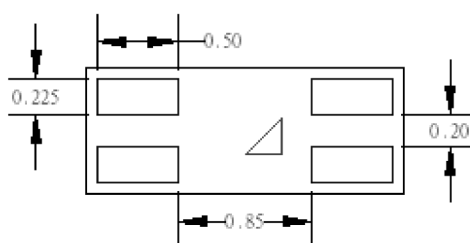
- ✓ High Brightness in small SMD package (L x W x H): 2.0 x 0.8 x 0.6 mm
- ✓ Environmental friendly ; RoHS compliance
- ✓ Compatible with reflow soldering.
- ✓ High density **Infrared Red / Red** emitter
- ✓ JEDEC MSL 2a



Unit : mm

Tolerance : ± 0.1 mm

Recommend Soldering Pad Layout





Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	--	1.4	1.8	V
Luminous Flux	Φ_v	$I_F = 20\text{mA}$	2.0	3	-	mW/sr
Wavelength	λ_p	$I_F = 20\text{mA}$	935	--	945	nm
View Angle	θ	$I_F = 20\text{mA}$	-	120	-	deg
Thermal Resistance	R_{th}	$I_F = 20\text{mA}$	-	TBD	-	$^{\circ}\text{C/W}$

Notes: Optical and electrical testing condition is based on 50ms pulse.

DR <660nm>

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	--	2.0	2.4	V
Luminous Flux	Φ_v	$I_F = 20\text{mA}$	3.6	4.5	-	mW/sr
Wavelength	λ_p	$I_F = 20\text{mA}$	655	--	665	nm
View Angle	θ	$I_F = 20\text{mA}$	-	120	-	deg
Thermal Resistance	R_{th}	$I_F = 20\text{mA}$	-	TBD	-	$^{\circ}\text{C/W}$

Notes: Optical and electrical testing condition is based on 50ms pulse.

■ Absolute Maximum Ratings

Parameter	Symbol	Color	Value	Unit
DC Forward Current ⁽¹⁾	I_F	IR(940nm)	120	mA
		R(660nm)	60	
Pulse Forward Current ⁽²⁾	I_{FP}	IR(940nm)	200	mA
		R(660nm)	120	
Power Dissipation (Pulse Mode)	P_d	IR(940nm)	0.6	W
		R(660nm)	0.6	
Storage Temperature	T_s		-40 ~ 100	$^{\circ}\text{C}$
Operation Temperature	T_{opr}		-40 ~ 85	$^{\circ}\text{C}$
Junction Temperature	T_J		115	$^{\circ}\text{C}$
Soldering Temperature			260 (5sec)	$^{\circ}\text{C}$

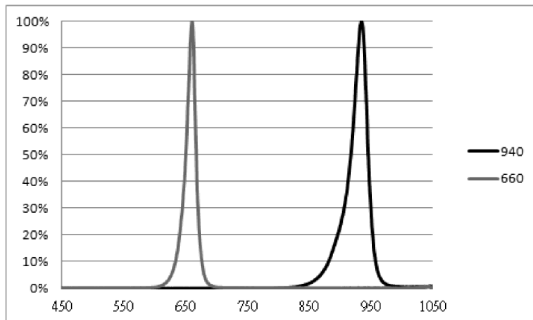
(1) Operating temperature has to be controlled under junction temperature limitation.

(2) I_{FP} shall be applied under conditions as max duration time 400ms and 1/10 duty cycle.

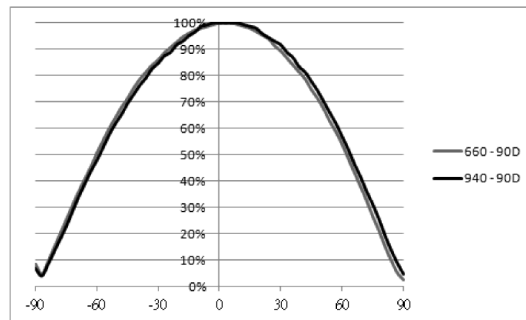
(3) Reliability tests are based on MCPCB.



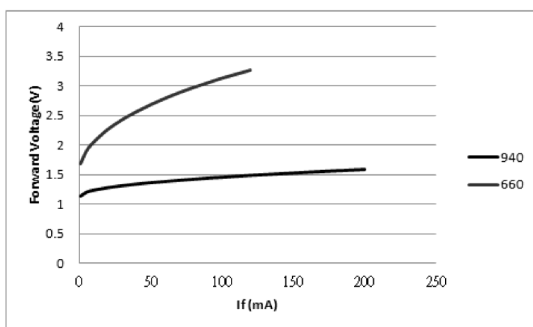
Spectrum



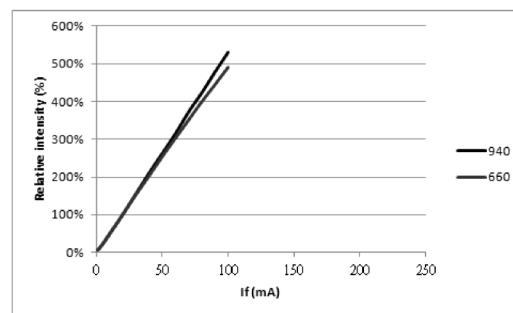
Radiation Pattern



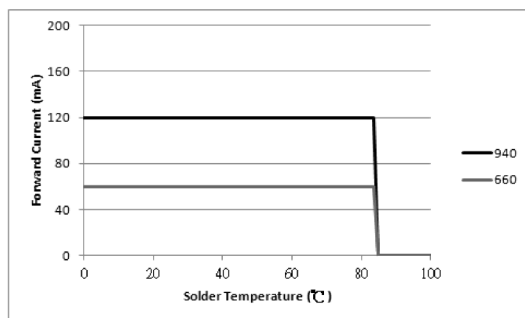
Forward Current vs. Forward Voltage



Forward Current vs. Relative Luminous Flux



Allowable Forward Current vs. Ambient Temperature



Soldering Notice and Conditions

- When soldering LEDs,
- Do not solder/reflow the same LED over two times.
- Recommend soldering conditions:
Hand soldering: 300 °C max , 3 sec. max.
Reflow soldering: Pre-heat 180 °C max , 180 sec. max.
Peak 260 °C max , 5 sec. max.
- Reflow temperature profile as below: (lead-free solder)

