

◎ MINI TYPE LED LAMPS

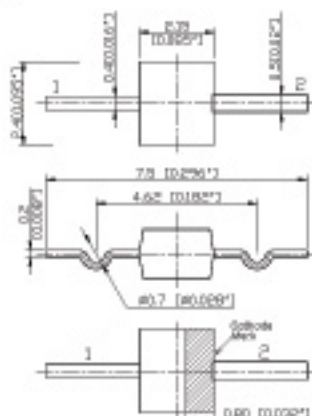
小型化發光二極體指示燈

GH-2033-23 Series Electro-Optical Characteristics:

Code for parts GH-XXXXX	Lighting Color	Material	V _F (V)		λ (nm)			I _v (mcd) Min	Internal Circuit
			Typ	Max	λ _D	λ _P	Δλ		
RQ0933TP-23E	Red	AlGaInP	2.0	2.5	630	640	20	80	
OV0933TP-23E	Orange	AlGaInP	2.2	2.7	624	635	20	80	
YU0933TP-23E	Yellow	AlGaInP	2.0	2.5	590	595	20	80	
GB0933TP-23J	Green	AlGaInP	2.0	2.5	574	575	20	25	
G31433TP-23H	Green	GaInN	3.3	3.8	525	520	30	160	
BL1433TP-23H	Blue	GaInN	3.50	4.00	485	490	30	40	
WV1433TP-023H	White	GaInN	3.50	4.00	X=0.22~0.38 Y=0.22~0.36			170	



◎ Package Outline Drawing:

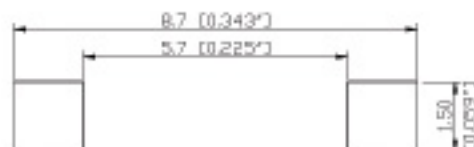


- NOTES:** 1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.2\text{mm}$ (0.008inch) unless otherwise noted;
3. Resin color: water clear.

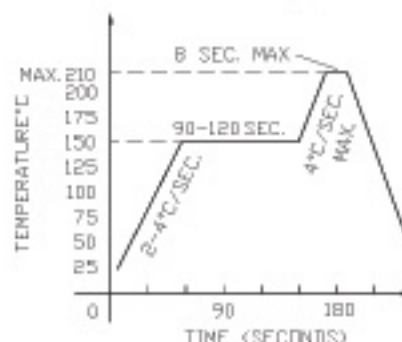
● Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter ($+10^\circ\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

● Recommended Soldering Pattern For Reflow Soldering



● Recommended Reflow Soldering Profile.



◎ Absolute Maximum Ratings:

Series	I _F (mA)	*I _{FP} (mA)	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
GH-2033-23 Series	30	120	5	-40~+80	-40~+85

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