QT-Brightek PLCC Series

2016 PLCC-2 VCSEL

Part No.: QBLP673E-VXXXA
XXX = 680nm, 850nm, or 940nm

Table of Contents:

Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Compact 2016 PLCC-2 package
- VCSEL 680nm, 850nm & 940nm
- ESD Protection
- 680nm: Viewing Angles 25 Degree
- 850nm: Viewing Angles 36 Degree
- 940nm: Viewing Angles 18 Degree

Description:

This 2016 VCSEL has a height profile of 0.55mm. Combination of high brightness output and robust package, this device is ideal for Infrared Sensor, medical device and consumer electronic application.

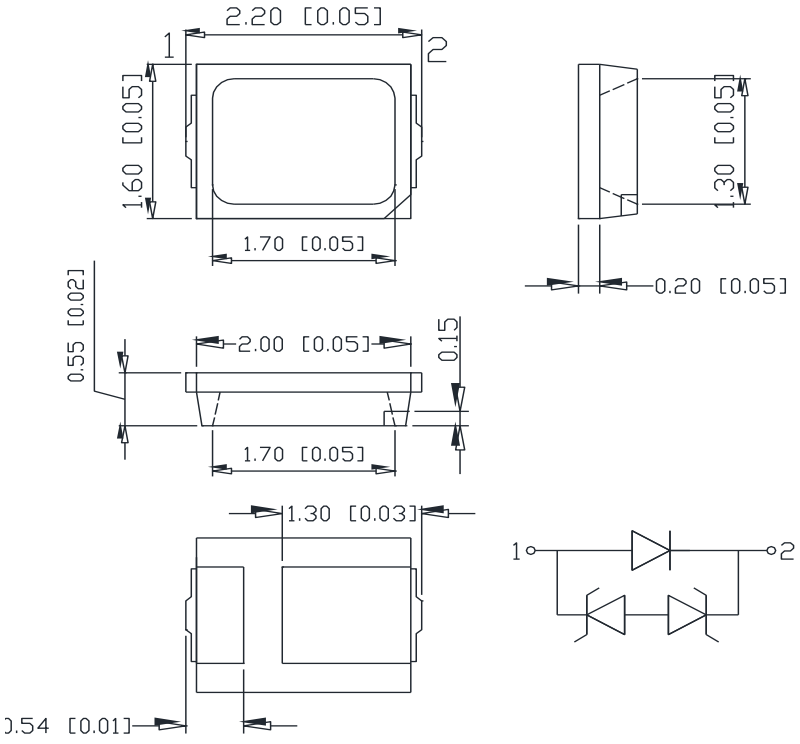
Application:

- Infrared Sensor
- Medical device
- Consumer electronics

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant

Dimension:



Units: mm / tolerance = +/-0.2mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I_F(mA)	V_F(V)		λ_P (nm)			Po(mW)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP673E-V680A	Infrared	9	2.4	2.8	670	680	690	2.5	4
QBLP673E-V850A	Infrared	9	2.4	2.8	840	850	860	3	4.5
QBLP673E-V940A	Infrared	9	1.9	2.1	930	940	950	4.5	6

Absolute Maximum Rating

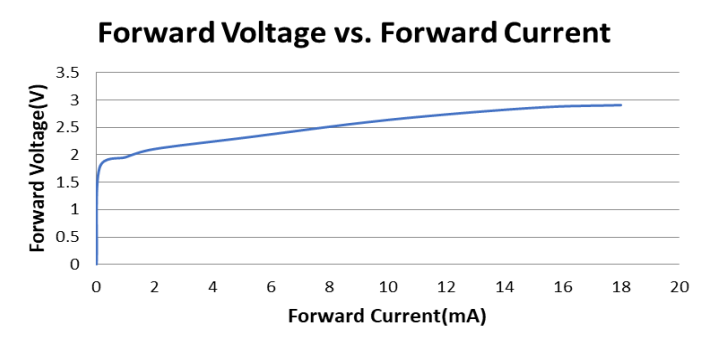
λ_P (nm)	I_F (mA)	I_{PF} (mA)*	Ir (uA) @ V_R =5V	T_{OP} (°C)	T_{ST} (°C)	T_{SOL} (°C)**
680	9	12	1	-20 ~ +70	-40 ~ +85	260
850	12	-	1	-20 ~ +85	-40 ~ +85	260
940	12	-	1	-20 ~ +85	-40 ~ +85	260

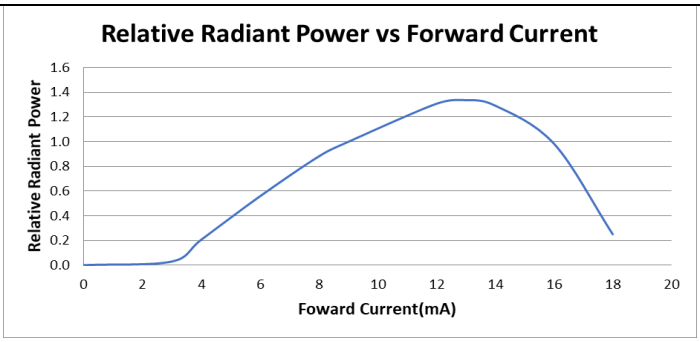
*≤1us pulse width, 1% Duty Cycle
**IR Reflow for no more than 10 sec @ 260 °C

Note:
Tolerance of measurement of forward voltage: ±0.1V
Tolerance of measurement of output power: ±15%
Tolerance of measurement of peak wavelength: ±2nm

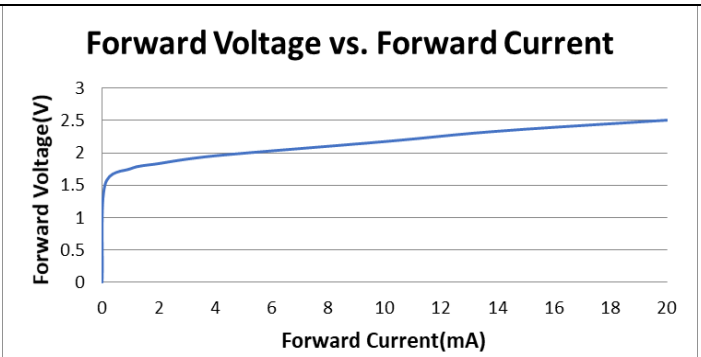
Characteristic Curves

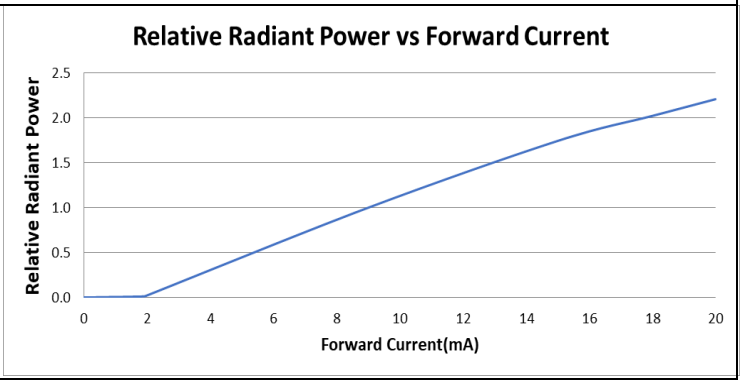
VCSEL 680nm



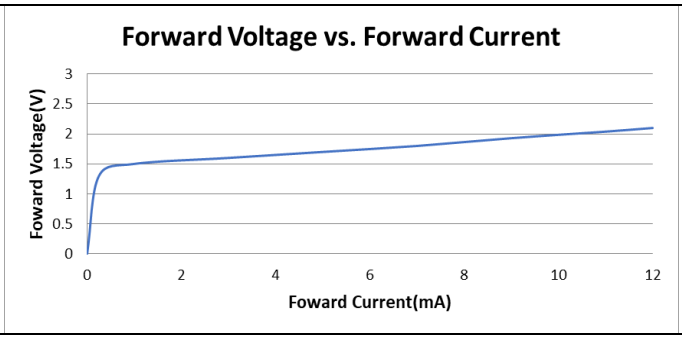


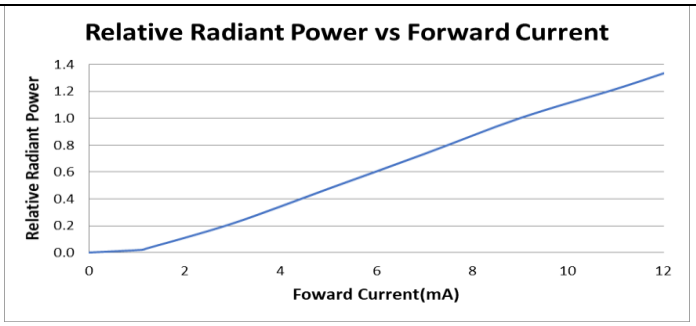
VCSEL 850nm





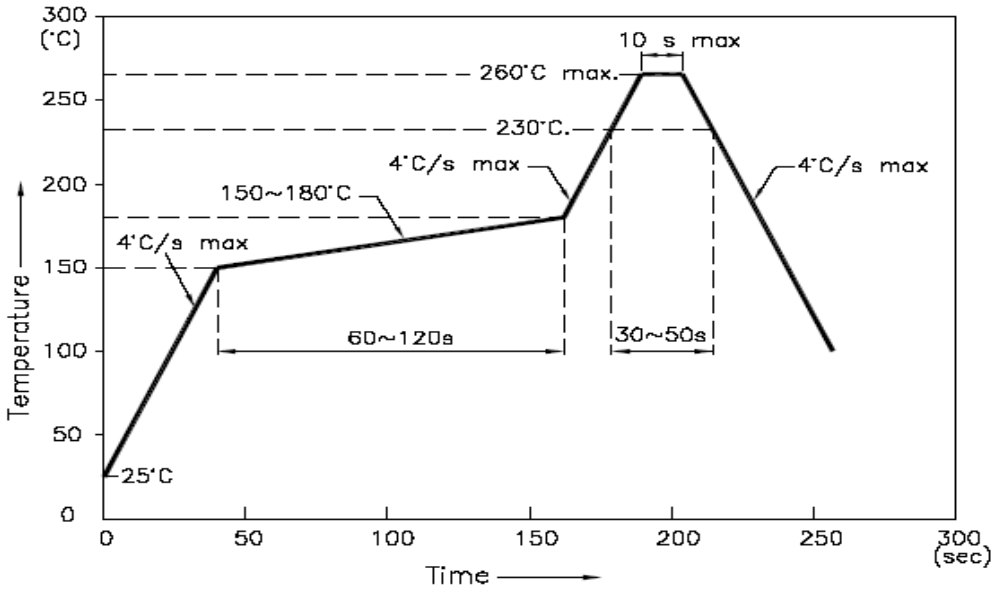
VCSEL 940nm



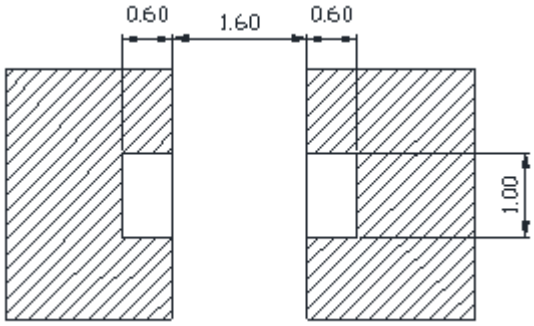


Solder Profile & Footprint

-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



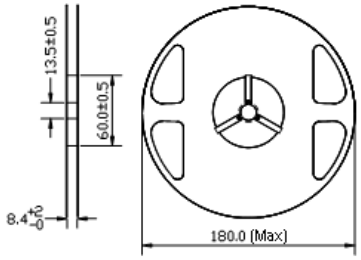
Recommended Pad Layout



Units: mm Tolerance: ± 0.2mm

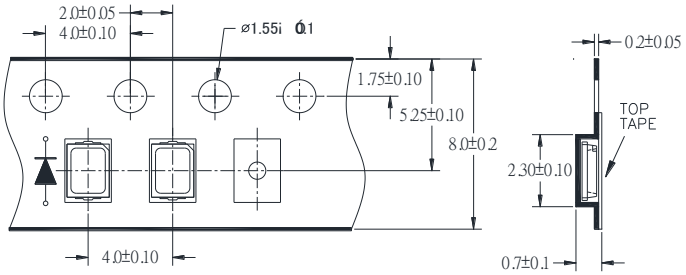
Packing

Reel Dimension:



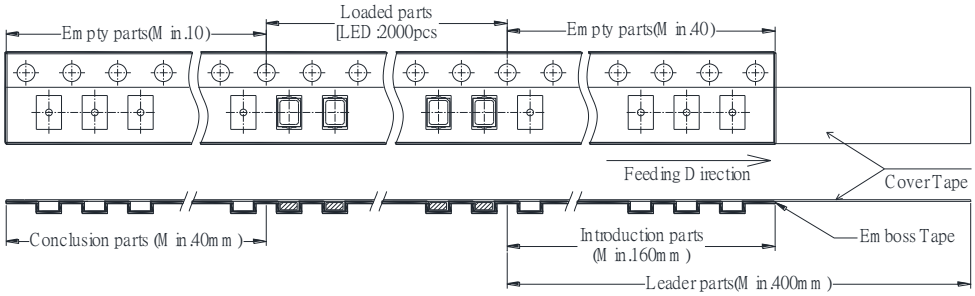
Unit: mm

Tape Dimension:

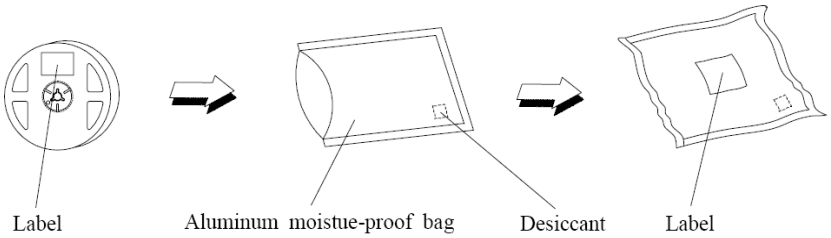


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Labeling

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP673E-V680A	QBLP673E-V680A	Po=4 typ. mW @ 9mA / WLP=680nm	2,000 units
QBLP673E-V850A	QBLP673E-V850A	Po=4.5 typ. mW @ 9mA / WLP=850nm	2,000 units
QBLP673E-V940A	QBLP673E-V940A	Po=6 typ. mW @ 9mA / WLP=940nm	2,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP673E-VXXXA	V1.0	02/19/ 2021

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.

2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.