

LIGHT



Absolute Maximum Ratings at Ta=25

Parameter	MAX.	Unit
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Collector Current	50	mA
Moisture Sensitivity Level ^{*1}	3	
Operating Temperature	-40 to + 85	
Storage Temperature	-40 to + 85	
IR Reflow Temperature ^{*3}	260 for 10 Seconds MAX.	

1. Storage

- (1). Storage requirements before vacuum bag opened: Temperature<30 , Humidity<65%RH;
- (2). Check air leakage and vacuum bag damage before opened. If there is any issue found, check the humidity indicator card immediately after bag opened:
 - a. If color changes on “10% circle” of the humidity indicator card only and not the circles of 20% and above, components can be used without additional handling;
 - b. If color changes on both 10% and 20% circles but not the circles of 30% and above, components must be dehumidified according to the conditions of bullet (5);
 - c. If color changes on 10%, 20%, and 30% circle or above, the product should be returned to the supplier for high temperature dehumidification;
- (3). After bag opened, manual soldering or reflow process must follow the following requirements:
 - a. Complete soldering / reflow within 168 hours;
 - b. Requirements of working environment: Temperature<30 , Humidity<60%RH;
- (4). If the working condition is outside (3)a or (3)b requirement, the components must be dehumidified according to the conditions of bullet (5);
- (5). Low temperature dehumidification: temperature 60±5 , 24 hours;
- (6). Shelf life: 1 year. If it’s over 1 year from the production date on the package label, the components must be dehumidified according to the condition of bullet (5). If customer is unable to dehumidify, return components to LIGHT for dehumidification.

2. Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED if necessary.

3. IR Reflow Temperature:

It is the Plate Temperature.

4. Caution in ESD:

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Electrical Optical Characteristics at Ta=25

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector-Emitter Breakdown Voltage	BV_{CEO}	30	---	---	V	$I_C=0.1\text{mA}$ $E_e=0\text{mW/cm}^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	---	---	V	$I_E=0.1\text{mA}$ $E_e=0\text{mW/cm}^2$
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	---	---	0.4	V	$I_C=0.1\text{mA}$ $E_e=1\text{mW/cm}^2$
Rise Time	T_r	---	15	---	μs	$V_{CE}=5\text{V}$ $R_L=1\text{K}\Omega$ $I_C=1\text{mA}$
Fall Time	T_f	---	15	---	μs	
Collector Dark Current	I_{CEO}	---	---	100	nA	$V_{CE}=10\text{V}$ $E_e=0\text{mW/cm}^2$
On State Collector Current	$I_{C(ON)}$	0.8	1.0	---	mA	$V_{CE}=5\text{V}$ $E_e=1\text{mW/cm}^2$ $\lambda_p=940\text{nm}$

Note:

- $\theta_{1/2}$ is the off-axis angle at which the $I_{C(ON)}$ is half the axial $I_{C(ON)}$.

Carrier Tape Specifications (Loaded Quantity: 3500pcs/reel)

Note: Tolerance unless mentioned is $\pm 0.1\text{mm}$; Unit = mm

Moisture Resistant Packaging



