

SL-T2016IRPTB009-L75 DATA SHEET

SPEC. NO. : SZ21073101
DATE : 2021/07/31
REV. : A/1

Approved By:

Checked By:

Prepared By:

Absolute Maximum Ratings at Ta=25°C

Parameter	Rating	Unit
Input (Emitter)		
Pulse Forward Current ^{*3}	20	mA
Continuous Forward Current	8.5	mA
Reverse Voltage	2	V
Output (Detector)		
Collector Emitter Breakdown Voltage	85	V
Emitter Collector Breakdown Voltage	8.2	V
Collector Current	1.7	mA
Coupled		
Total Power Dissipation	25	mW
Operating Temperature	-25 to + 85	
Storage Temperature	-25 to + 85	
Reflow Soldering Temperature	260 MAX. for 10 Seconds MAX.	

Notes:

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 72 hours;
 - b. Requirements of working environment: Temperature<30 , Humidity<60%RH;
- (4). If the working condition is outside (3)a requirement, the components must be dehumidified according to the conditions of bullet (5);
- (5). Low temperature dehumidification: temperature 60±5 , at least 24 hours;
- (6). Shelf life: 180 days. If it's over 180 days 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. 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.

3. Pulse Forward Current:

Pulse Width 0.1ms and duty 10%.

Typical Product Characteristics (Ta=25)-Emitter

Characteristics	Symbol	Min.	Typ.	Max.	Unit	Test condition
Forward Voltage	V_F	-	2.0	2.5	V	$I_F=7mA$
Reverse Current	I_R					$V_R=2V$
Center Wavelength	λ_P	-	940	-	nm	$I_F=7mA$
Spectrum Width of Half Value	D_P	-	5	-	nm	$I_F=7mA$

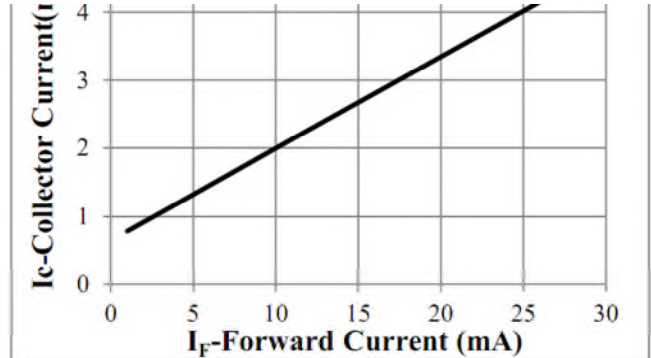
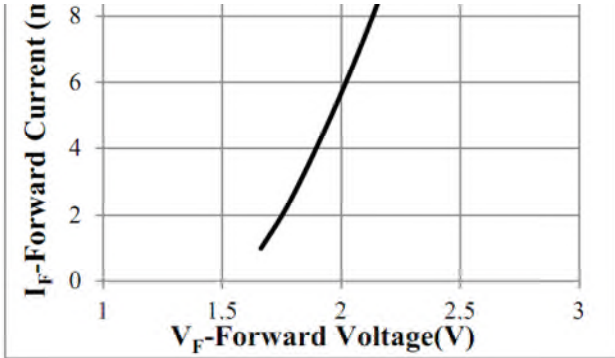
Note: Tolerance of Forward Voltage: $\pm 0.1V$.

Typical Product Characteristics (Ta=25)-Detector

Characteristics	Symbol	Min.	Typ.	Max.	Unit	Test condition
Collector Emitter Breakdown Voltage	BV_{CEO}	85	-	-	V	$I_C=100\mu A$ $L^*=0$
Emitter Collector Breakdown Voltage	BV_{ECO}	8.2	-	-	V	$I_E=10\mu A$ $L^*=0$
Collector Emitter Dark Current	I_{CEO}	-	2	30	nA	$V_{CE}=20V, L^*=0$ Fig. 2

Note: $L^* = 0$ (zero light condition)

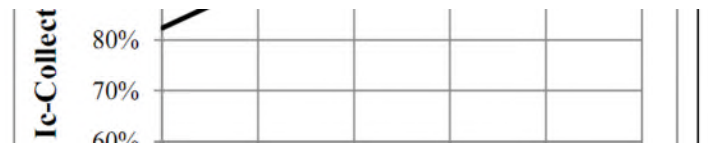
Optical Characteristics (Ta=25°C)



Note: V_{CE}=5V, D=1mm, Pulse width 0.1ms
5% Duty Cycle

3 Forward Voltage vs. Ambient Temperature

4 Collector Current vs. Ambient Temperature



Output Current Test Condition ($T_a=25^{\circ}\text{C}$)

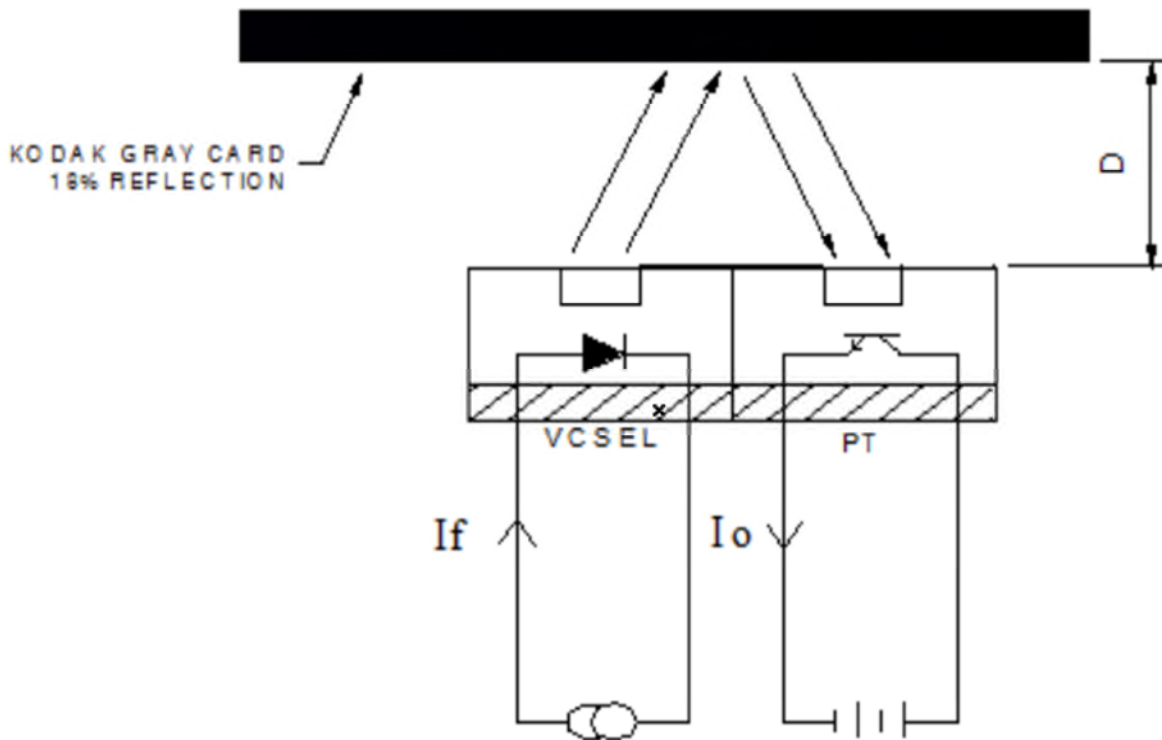


Fig.1 : Test Condition: $D = 1\text{mm}$ 18% Gray Card, $I_F=7\text{ mA}$, $V_{CE} = 5\text{V}$, Pulse width 0.1ms , 5% Duty Cycle

Dark Current Test Condition ($T_a=25^{\circ}\text{C}$)

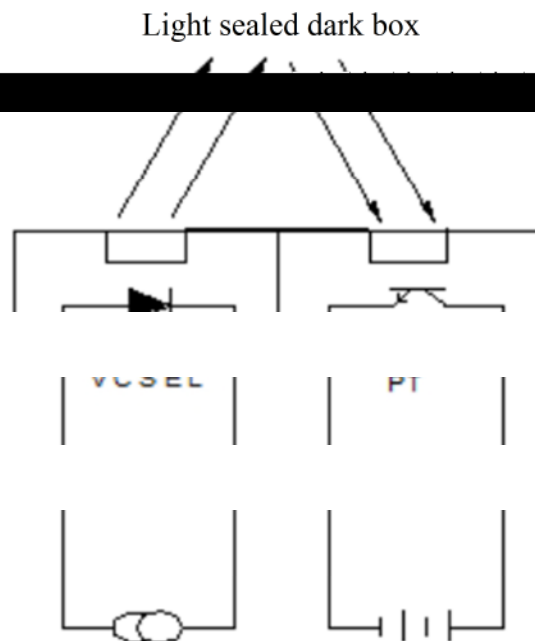
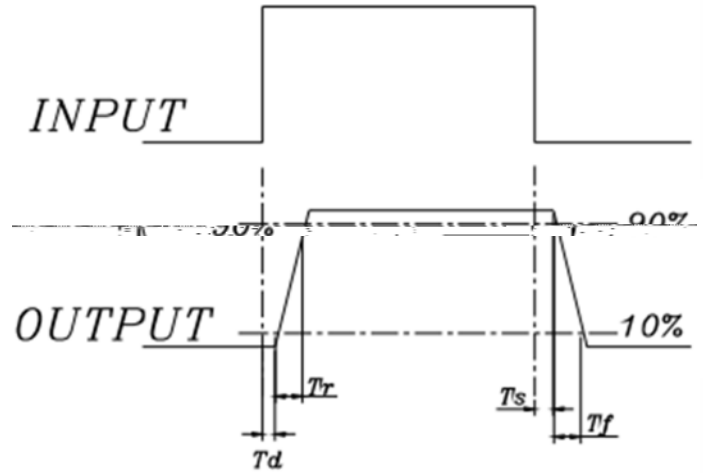
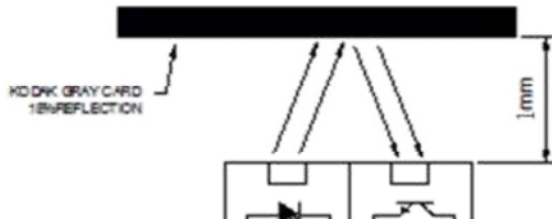


Fig.2: Test Condition: $I_{LED}=9\text{ mA}$, $V_{CE} = 5\text{V}$, Pulse width 0.1ms , 5% Duty Cycle.



Response Time Test Conditions (T_a = 25°C)





Label Explanation

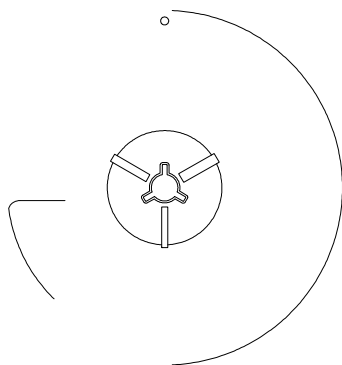
LIGHT Universal Label
(Reel Label)

Customer Defined Label
(Aluminum Moisture Proof Bag Label)

LIGHT		
Light Electronics CO., LTD.		
MODEL NAME: _____	 LOT NO.: _____	
QUANTITY: _____		
BIN: _____		
PACKING DATE: _____		
REMARKS: _____		

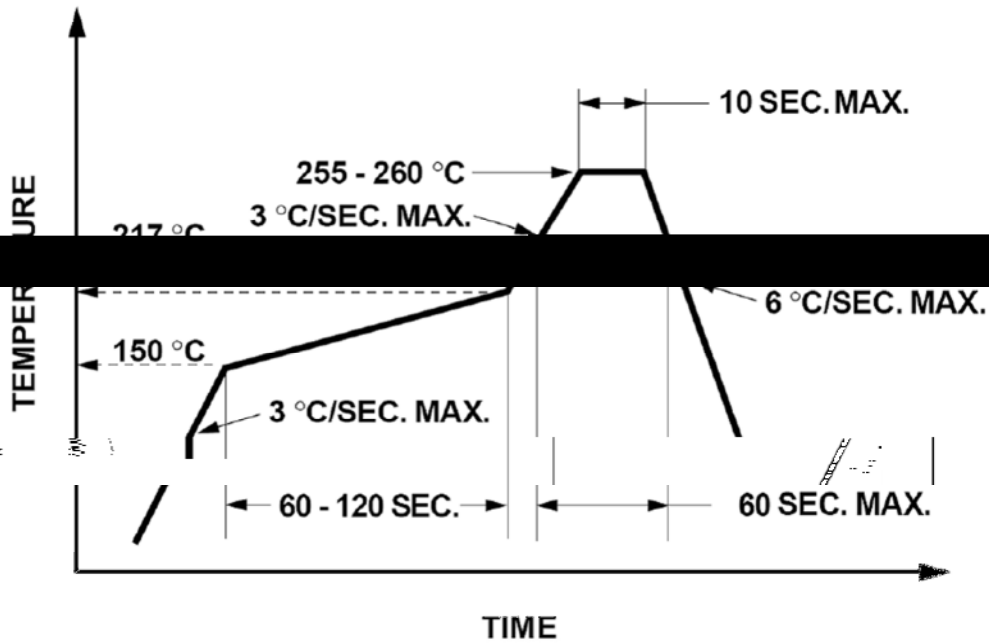
LIGHT		
Light Electronics CO., LTD.		
MODEL NAME: _____	 LOT NO.: _____	
QUANTITY: _____		
BIN: _____		
PACKING DATE: _____		
CUSTOMER P/N: _____		

Reel Dimensions



Note: Tolerance unless mentioned is $\pm 0.2\text{mm}$. Unit = mm





1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.

Soldering iron

1. When hand soldering, the temperature of the iron must less than 300°C for 3 seconds.
2. The hand solder should be done only once.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a 'double-head' soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.

