DATASHEET

ITR8307/L24/TR8

Features

- Fast response time
- High sensitivity
- Cut-Off visible wavelength
- Thin
- Compact
- Pb free
- This product itself will remain within RoHS compliant version.
- Compliance with EU REACH.
- Compliance Halogen Free .(Br <900 ppm ,Cl <900 ppm , Br+Cl < 1500 ppm).

Description

ITR8307/L24/TR8 is a light reflection switch which includes a GaAs IR-LED transmitter and a NPN photo-transistor with a high photosensitive receiver for short distance, operating in the infrared range. Both components are mounted side- by- side in a plastic package.

Applications

- Camera
- VCR
- Floppy disk driver
- Cassette type recorder
- Various microcomputer control equipment

Device Selection Guide

Device No.	Chip Material
IR	GaAlAs
PT	Silicon

Absolute Maximum Ratings (Ta=25℃)

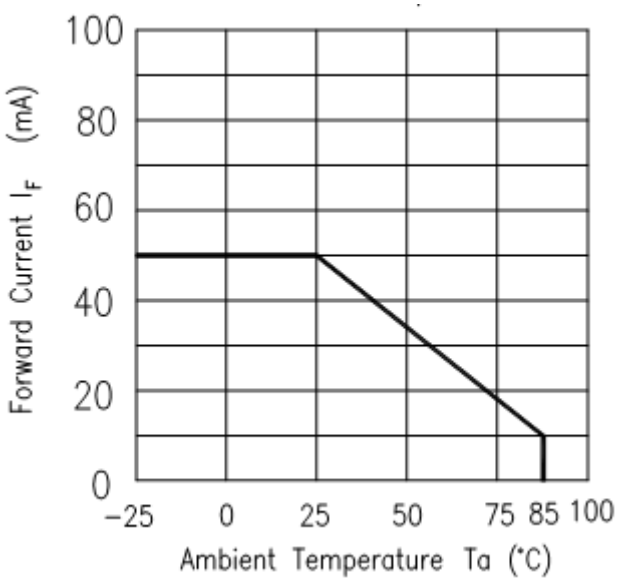
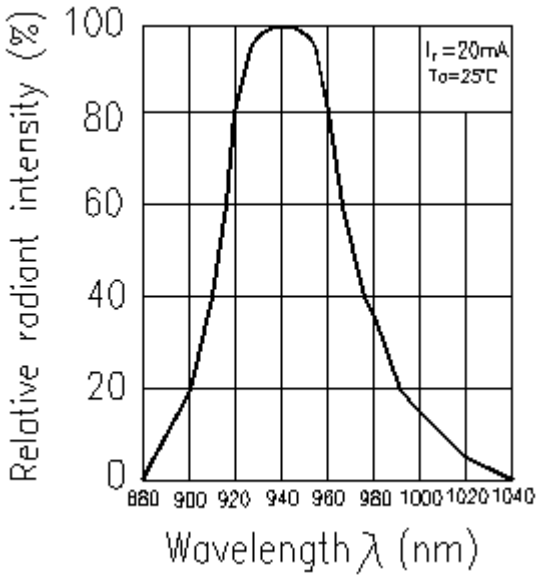
Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25℃Free Air Temperature	Pd	75	mW
	Reverse Voltage	V_R	6	V
	Forward Current	I_F	50	mA
	Peak Forward Current (*1) Pulse width ≦100μs, Duty cycle=1%	I_{FP}	1	A
Output	Collector Power Dissipation	P_C	100	mW
	Collector Current	I_C	20	mA
	Collector-Emitter Voltage	B V_{CEO}	15	V
	Emitter-Collector Voltage	B V_{ECO}	6	V
Operating Temperature		Topr	-25~+85	℃
Storage Temperature		Tstg	-30~+90	℃
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	℃

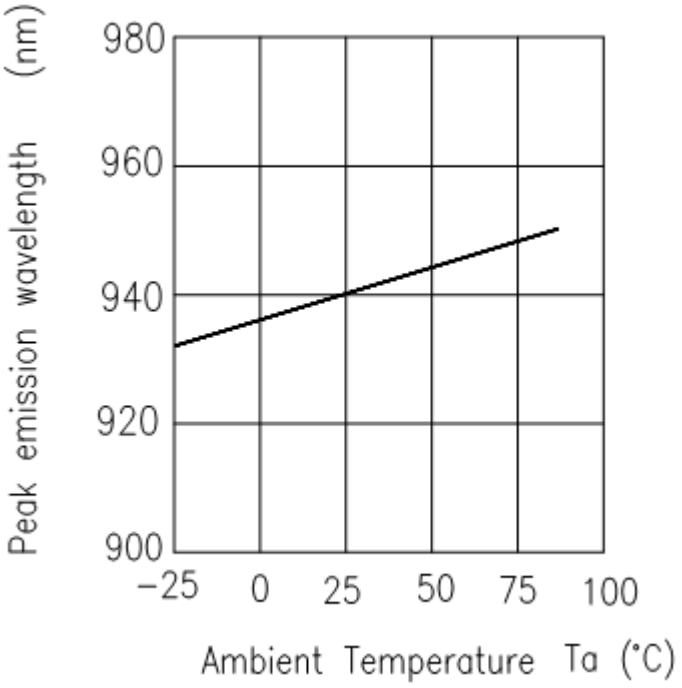
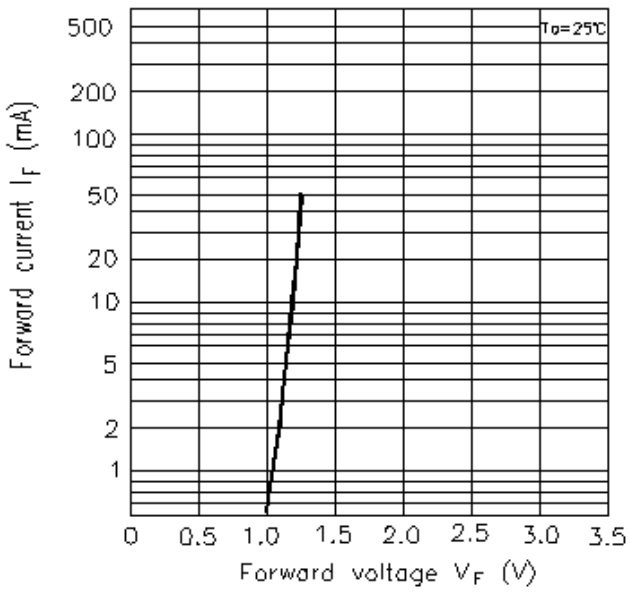
Notes: (＊1) tw=100 μsec. , T=10 msec. (＊2) t≦10 Sec

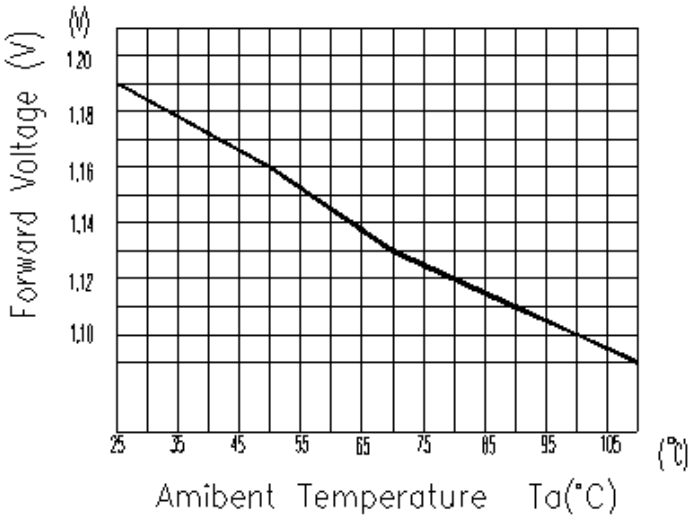
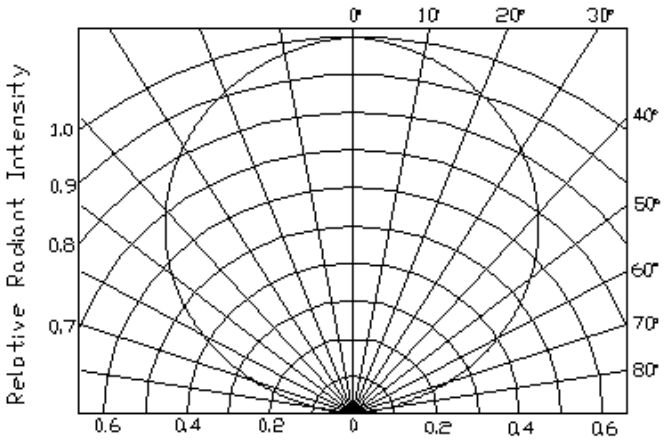
Electro-Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V_F	---	1.2	1.4	V	I_F=20mA
	Reverse Current	I_R	---	---	10	μA	V_R=6V
	Peak Wavelength	λ_P	---	940	---	nm	---
Output	Dark Current	I_{CEO}	---	---	1	μA	V_{CE}=10V
	C-E Saturation Voltage	V_{CE}(sat)	---	---	0.4	V	I_C=2mA ,Ee=1mW/cm^2
Transfer Characteristics	Light Current	$I_{C(ON)}$	0.5	---	15.0	mA	V_{CE}=2V, I_F=4mA
	Leakage Current	I_{CEOD}	---	---	5	μA	
	Rise time	t_r	---	---	400	μsec	V_{CE}=2V,I_C=100 μA R_L=100Ω
	Fall time	t_f	---	---	400	μsec	

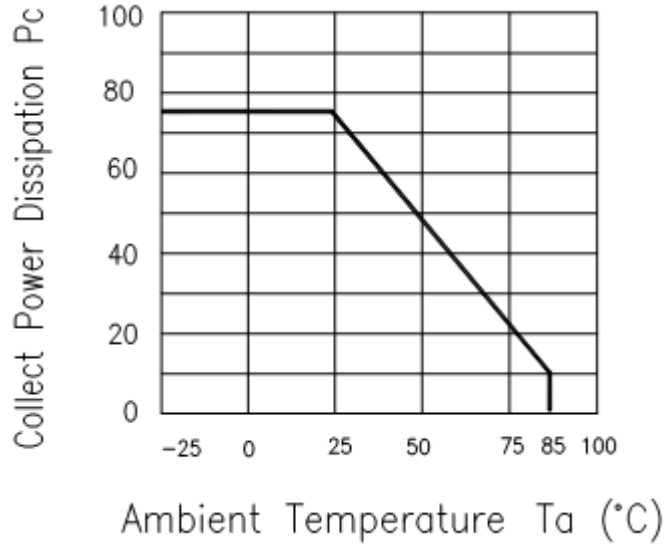
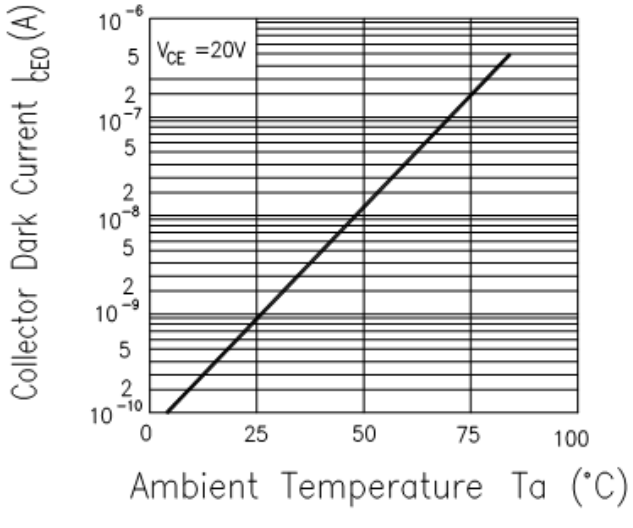
Typical Electrical/Optical/Characteristics Curves for IR

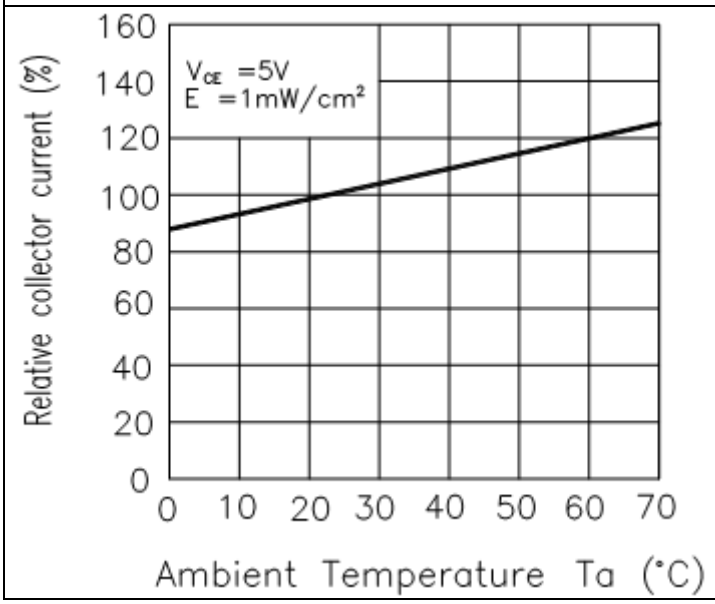
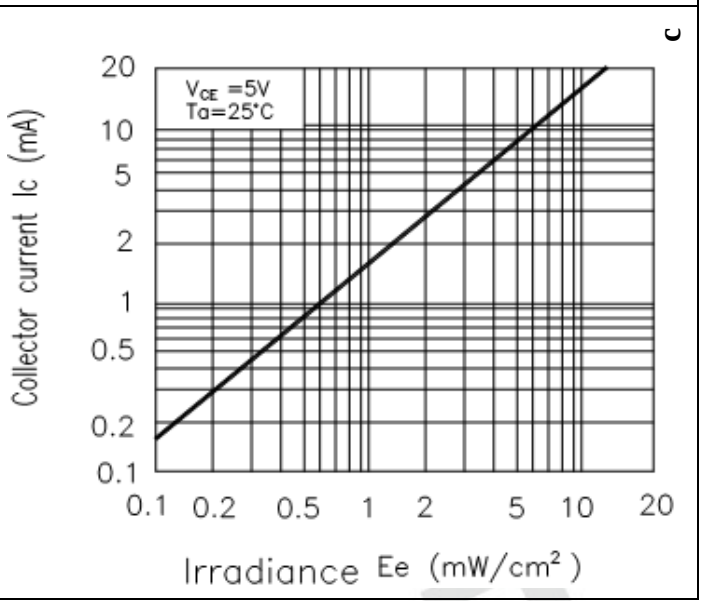
Forward Current vs. Ambient Temperature	Spectral Distribution
	

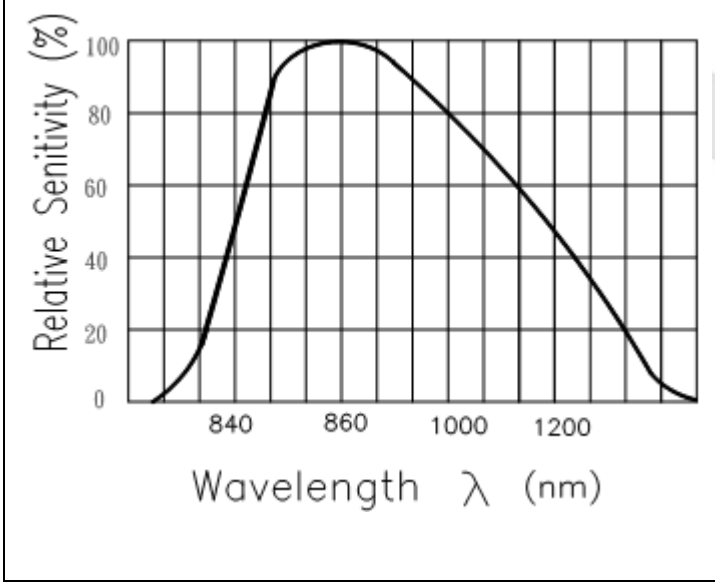
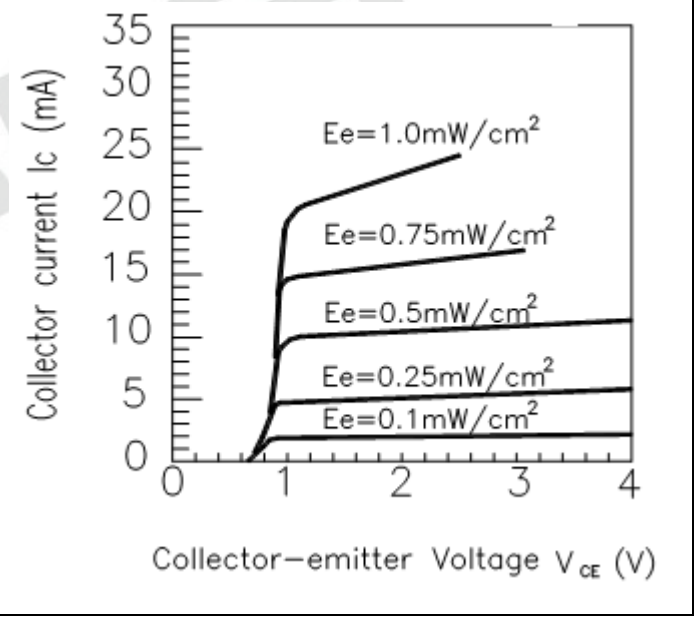
Peak Emission Wavelenght vs. Ambient Temperature	Forward Current vs. Forward Voltage
	

Forward Current vs. Ambient Temperature	Relative Radiant Intensity vs. Angular Displacement
	

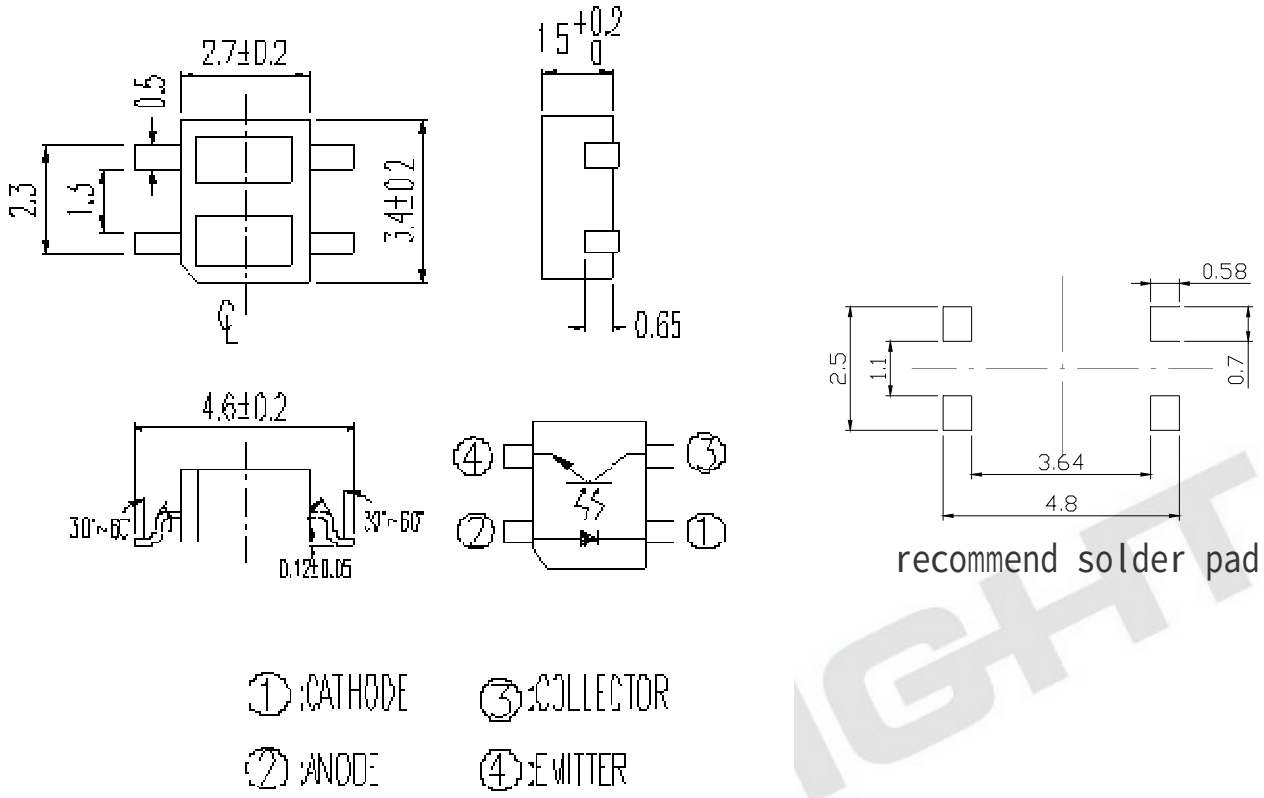
Typical Electro/Optical/Characteristics Curves for PT

Collector Power Dissipation vs. Ambient Temperature	Collector Dark Current vs. Ambient Temperature
	

Relative Collector Current vs Ambient Temperature	Collector Current vs. Irradiance
	

Spectral Sensitivity	Collector Current vs. Collector-emitter Voltage
	

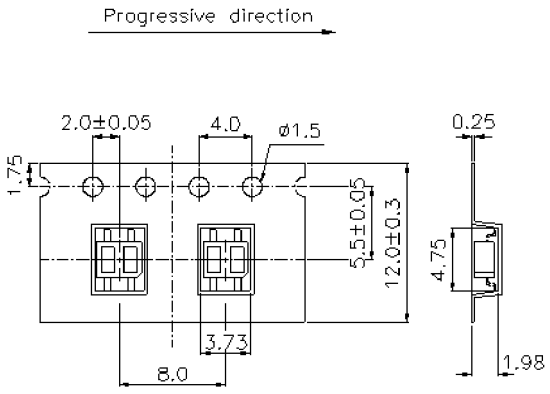
Package Dimension



Notes:

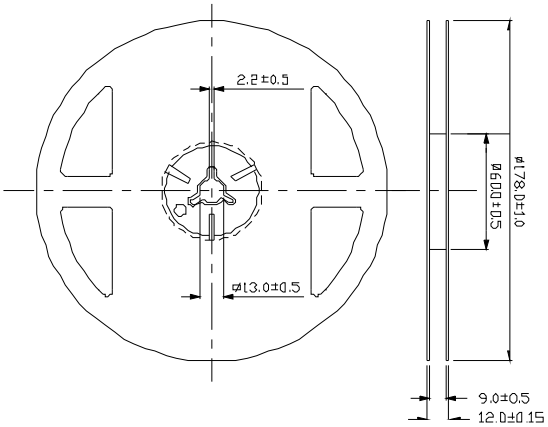
1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.25mm
3.Lead spacing is measured where the lead emerge from the package
4.Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification
5.These specification sheets include materials protected under copyright of EVERLIGHT corporation . Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent
6.When using this product , please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

Taping Dimension:



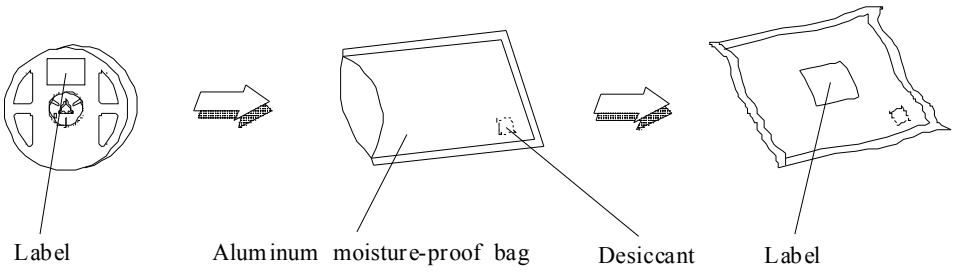
General Tolerance ±0.1
UNIT:mm

Reel Dimensions



Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

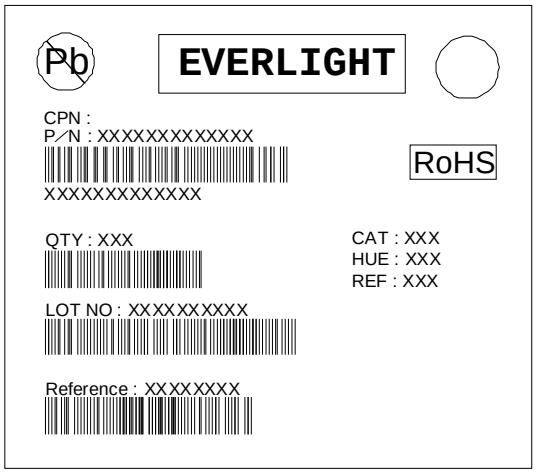
Moisture Resistant Packaging



Packing Quantity Specification

1. 1000 Pcs/ 1Reel
2. 15 Reel /1 Box
3. 2 Box/ 1 Carton

Label Form Specification



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

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