

4.8mm Semi-Lens Silicon PIN Photodiode PD438B/L1

Features

- Fast response times
- High photo sensitivity
- Small junction capacitance
- Pb free
- The 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

- PD438B/L1 is a high speed and sensitive PIN photodiode in a cylindrical side view plastic package. The epoxy package itself is an IR filter , spectrally matched to IR emitter.

Applications

- High speed photo detector
- Camera
- Optoelectronic switch
- VCRs , Video camera

Device Selection Guide

Chip	Lens Color
Material	
Silicon	Black

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	32	mA
Power Dissipation	P _d	150	mW
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature(*1)	T _{sol}	260	°C

Notes: *1: Soldering time ≤ 5 seconds.

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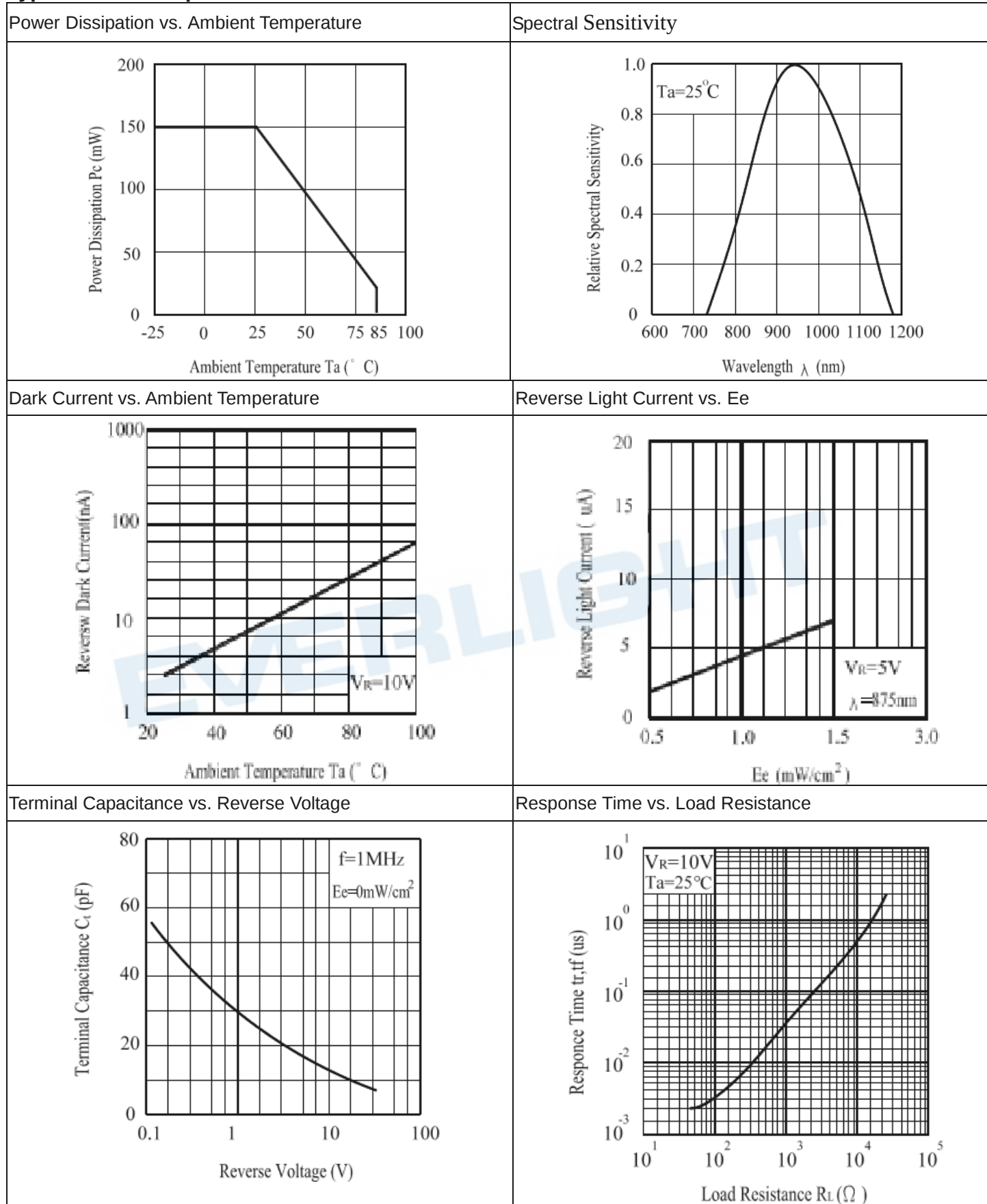
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Rang of Spectral Bandwidth	$\lambda_{0.5}$	400	-----	1100	nm	-----
Wavelength of Peak Sensitivity	λ_p	-----	940	-----	nm	-----
Open-Circuit Voltage	VOC	-----	0.41	-----	V	Ee=5m W/cm2 $\lambda_p=940\text{nm}$
Short- Circuit Current	ISC	-----	4	-----	uA	Ee=1m W/cm2 $\lambda_p=940\text{nm}$
Reverse Light Current	I_L	2.6	4	-----	uA	Ee=1m W/cm2 $\lambda_p=940\text{nm}$ VR=5V
Dark Current	I_d	----	5	30	nA	Ee=0m W/cm2 VR=10V
Reverse Breakdown	BVR	32	170	-----	V	Ee=0m W/cm2 IR=100μA
Total Capacitance	Ct	----	6	----	pF	Ee=0m W/cm2 VR=3V f=1MHZ
Rise/Fall Time	tr/tf	----	10/10	----	nS	VR=10V RL=1KΩ

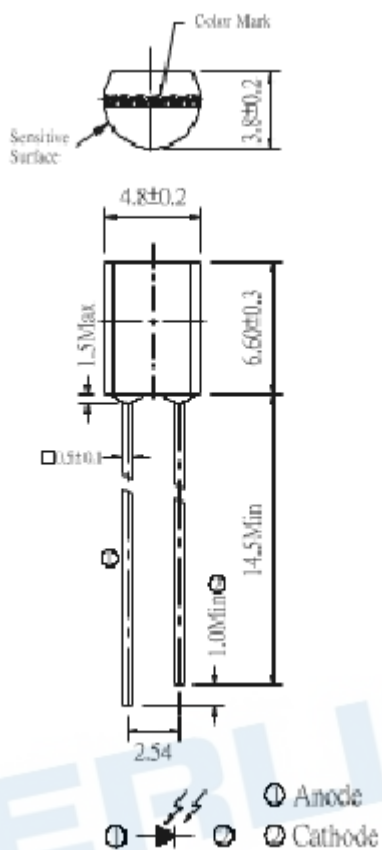
Note:

Tolerance of Luminous Intensity: $\pm 10\%$
Tolerance of Dominant Wavelength: $\pm 1\text{nm}$
Tolerance of Forward Voltage: $\pm 0.1\text{V}$

Typical Electro-Optical Characteristics Curves



Package Dimension



Note: Tolerances unless dimensions ± 0.25 mm

Packing Specification

■ Packing Quantity

1. 1000 PCS/1 Bag, 4Bags/1 Inner Carton
2. 10Inner Cartons/1 Outside Carton

Label Form Specification

RoHS		EVERLIGHT	5
CPN: XXXXXXXXXXXXXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX			
P/N: XXXXXXXXX			
XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX-XXXXXX			
LOT NO:XXXXXXXXXX-XXXXXXXXXX-XXXXXXXXXX			
QTY: XXXXXXXXX HUE: XXXXXXXXX			
CAT: XXXXXXXXX REF: XXXXXXXXX			
REFERENCE: XXXXXXXXXXXXX			
MADE IN XXXXXX			



- 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

Notes:

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT 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.
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