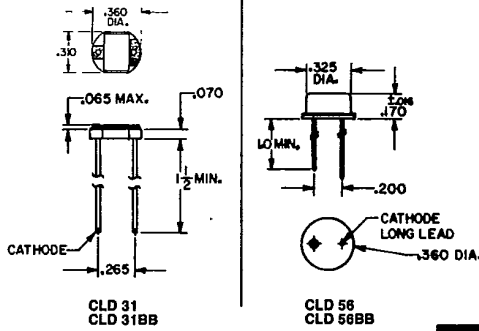


T-41-51

Product Data

CLD31
CLD56
CLD31BB
CLD56BB

Silicon Planar
Photovoltaic Diodes



The anode of "V" versions are identified by a color dot

4

GENERAL DESCRIPTION — The CLD Series of Photo-diodes is specifically designed to optimize Photovoltaic characteristics. They are all Silicon PN Planar diodes, with 2 diodes in hermetic bases for stringent environmental applications and 2 epoxy encapsulated devices for lower cost applications. All diodes offer high linearity, low dark current, and fast response for use in critical measurement applications. These units are also available with a special filter material to block out response to visible light; CLD31V.

ABSOLUTE MAXIMUM RATINGS

- Maximum Temperatures
- Storage Temperature -35°C to +150°C
- Operating Junction Temperature +150°C
- Storage, Operating Temperature of Epoxy Encapsulated Device -30°C to +85°C (5)

All dimensions ±.005 except as noted.

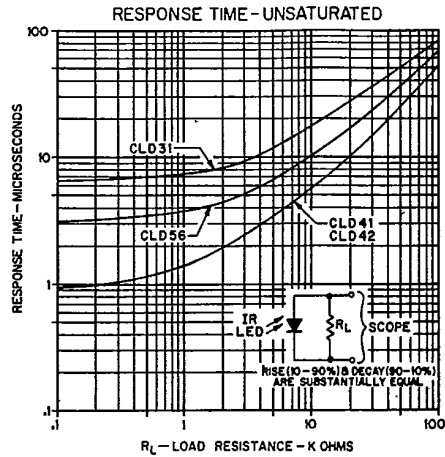
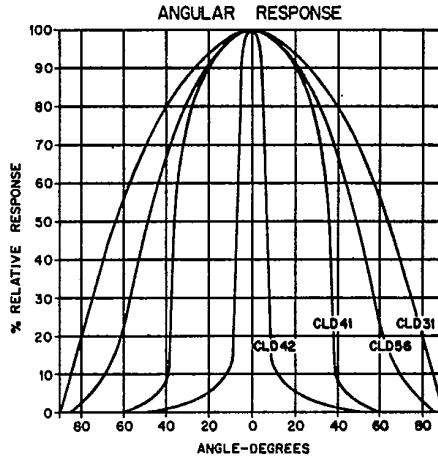
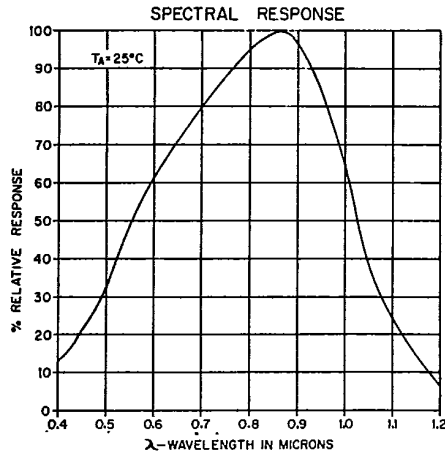
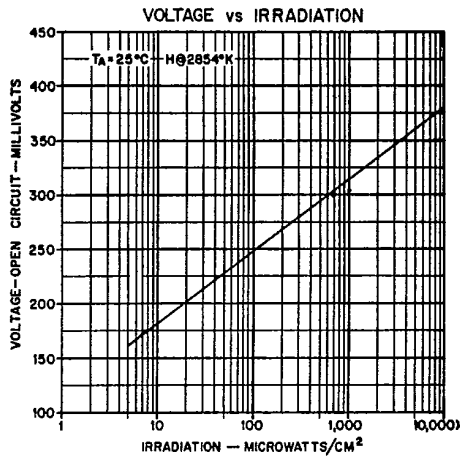
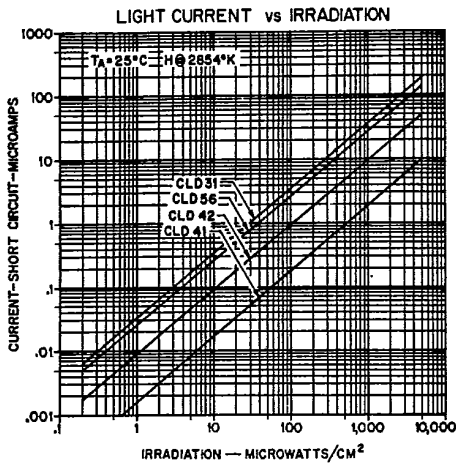
ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated.)

Symbol	Characteristics	CLD31		CLD31BB		CLD56		CLD56BB		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
LXW	Active Area	.222 x .122		.222 x .122		.222 x .122		.222 x .122		inches
I _{sc}	Short Circuit Current (1) H = 5mw/cm ²	150		150		100		100		μA
V _{oc}	Open Circuit Voltage (1) H = 5mw/cm ²	.35 Typ.		.35 Typ.		.35 Typ.		.35 Typ.		Volts
I _D	Dark Current V = 100 mv H = 0 V = -15 v		100		50		100		50	nA
C _J	Junction Capacitance (2)	400		400		400		400		pf
t _r , t _f	Rise or Fall time (3)	10		10		10		10		μsec
ΔT _{sc}	Temperature Coefficient I _{sc} (1) (4)	+.2% Typical								%/C°
	Peak Spectral Response	8600 Typ.		8600 Typ.		8600 Typ.		8600 Typ.		Å

- (1) Light source is a frosted tungsten incandescent lamp at 2854°K.
- (2) Measured at 0 bias with f = 1MHZ.
- (3) Measured in an unsaturated condition with an IR source and a load resistor of 1Kohms.
- (4) Typical open circuit voltage temperature coefficient is -2mV/°C.
- (5) Can supply units rated for 100 C

Consult factory for special I_D selections

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PHOTOVOLTAIC DIODE EQUIVALENT CIRCUIT

