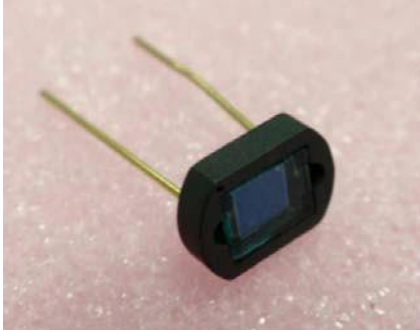




A09-MC

Visible sensitivity photodiode

A09-MC



Description

The A09-MC is visible light response high-output, high-speed silicon photo diode which is mounted in 2PIN ceramic package, permits wide angular response.

Features

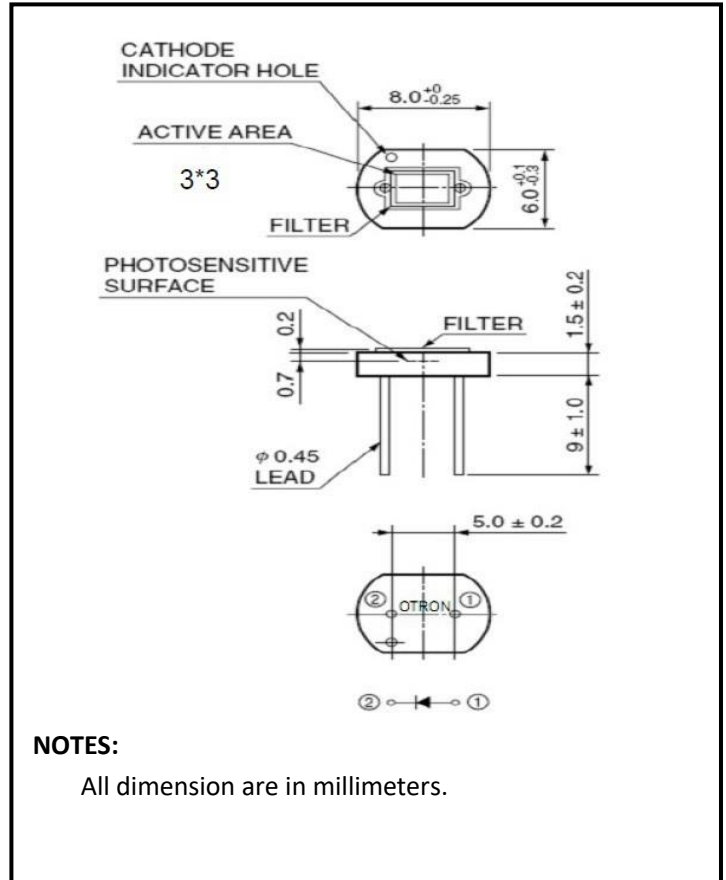
- * High speed response from 300nm to 700nm.
- * Wide angular response
- * High reliability in demanding environments
- * Operating temperature is from -40 to +100°C
- * Storage temperature is from -40 to +100°C
- * soldering temperature is 260°C @Max.5 seconds at the position of 2mm from the PIN leg.

General Ratings

- * Type Silicon Photodiode
- * High linearity
- * Chip active area: 3.0mm*3.0mm
- * Low dark current

Applications

- *Exposure meter for daylight
- *Illuminometer/ Luminance meter
- *CRT Brightness Control
- *Analytical instrument/ Medical equipment
- *LED/Alphanumeric Operational Monitor



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission.

Specifications are subject change without notice

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A09-MC

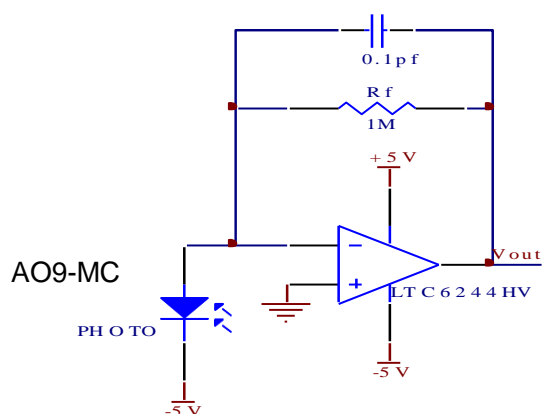


Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Short circuit Current	I _{sc}	Ev=100lx fc=2856k*		1.6		μA
Isc Temperature Coefficient	TC I _{sc}	2856k		1.1		%/°C
Open Circuit Voitage	V _{oc}	Ev=100lx fc=2856k*		216		mV
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I _D	V _R =10mV		50		pA
		V _R =10V		480		
Rise time	t _r	V _R =5V; ė=850nm; R _L =50Ω		360		ns
Tempcoeffi-cient of ID TCID				0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	30			V
Junction Capacitance	C _J	V _R =0V f=1MHz		33		pA
		V _R =10V f=1MHz		8.2		
Photo sensitivity	S _R	460nm		0.17		A/W
		550nm		0.19		
Spectral Application Range	ė _{range}		300		800	nm
Spectral Response-Peak	ė _p			550		nm
Shunt resistance	R _{sh}	V _R =10mV		0.2		GΩ
Rsh Temperature Coefficient	TC R _{sh}			0.18		%/°C
Angular Resp 50% Resp Pt	ė ^{1/2}			±60		Degrees
Noise Epuivalent Power	NEP	V _R =10V ė=550nm		5.9×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =10V ė=550nm		5.1×10 ¹²		cm(Hz/W) ^{1/2}

* Ev: Illuminance by CIE standard light source A (tungsten lamp)

Typical application circuit



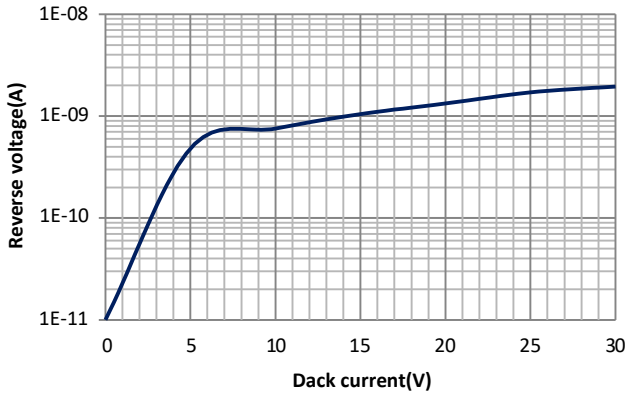
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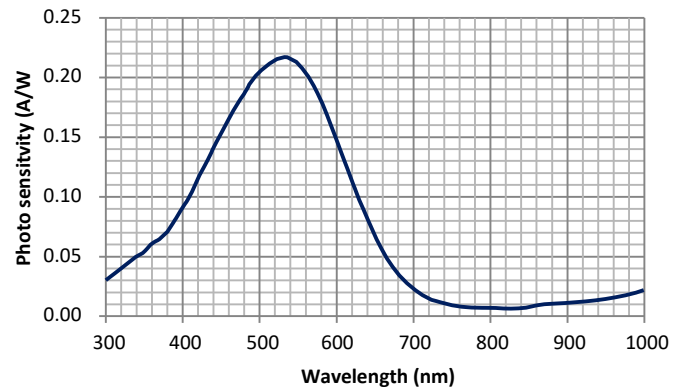


A09-MC

■ Dark current vs. reverse voltage

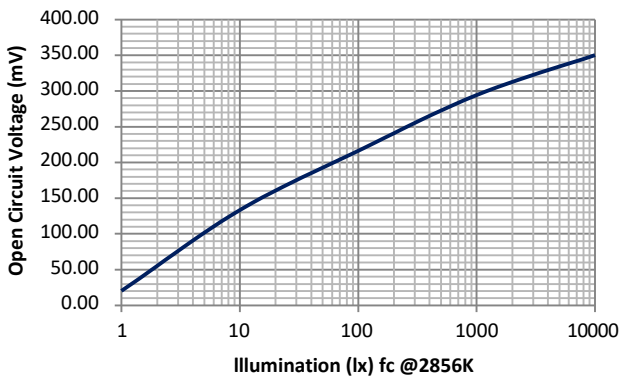


■ Spectral response



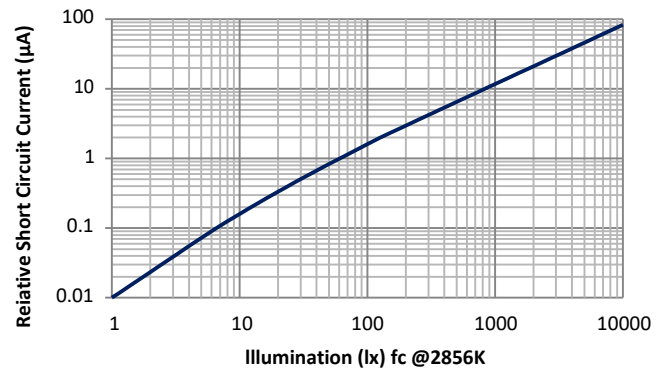
■ Open circuit Voltage

vs Illumination



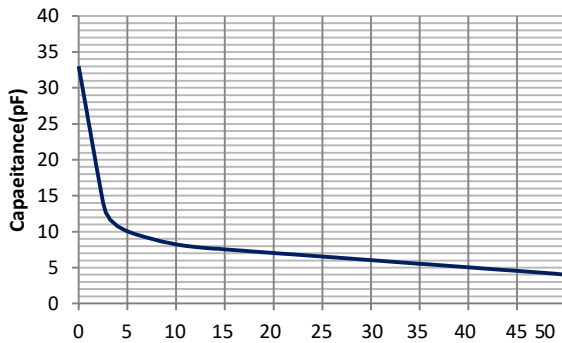
■ Relative Short Circuit

Current vs. Illumination

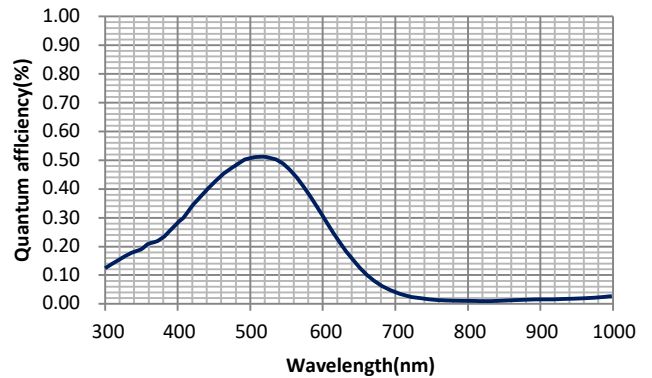


■ Relative Junction Capacitance

VS. Voltage



■ Quantum efficiency



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