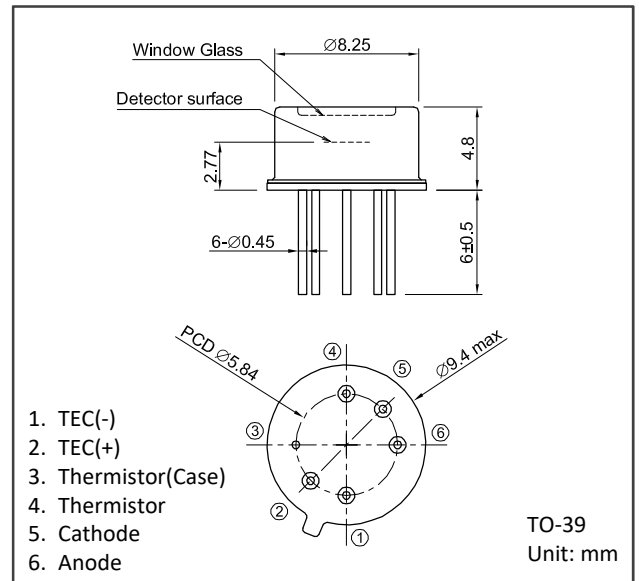


Features

- $\phi 1.0$ mm sensitive area
- Cutoff wavelength $3.5\mu\text{m}$
- TO-39 package
- One-stage TE cooler

Applications

- MID-IR sensors
- MID-IR spectroscopy
- Gas analysis
- Temperature sensors



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Note
Reverse voltage	V_R	0.5	V	
TEC current	I_C	1.0	A	
Thermistor power dissipation	P_{th}	1.5	mW	
Operating temperature	T_{opr}	-40 to +60	$^{\circ}\text{C}$	Avoid dew condensation
Storage temperature	T_{stg}	-40 to +80	$^{\circ}\text{C}$	Avoid dew condensation

Electrical and Optical Characteristics ($V_R=0\text{V}$ unless otherwise noted)

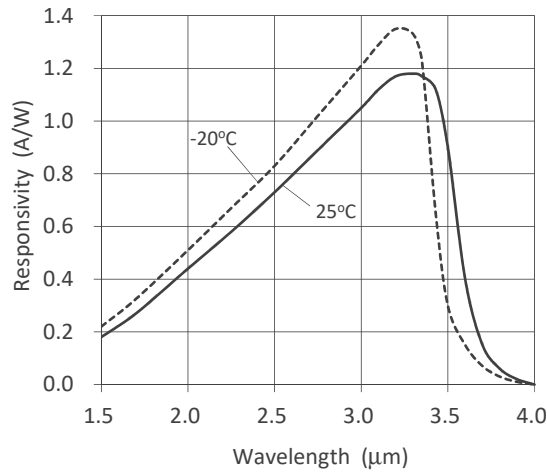
- Chip temperature $T_{PD}=25^{\circ}\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Cutoff wavelength	λ_c	-	3.5	-	μm	
Peak sensitive wavelength	λ_p	-	3.3	-	μm	
Responsivity	R	1.0	1.2	-	A/W	$\lambda=\lambda_p$
Shunt resistance	R_{sh}	15	18	-	Ω	
Ditectivity	D^*	2.5×10^9	3.5×10^9	-	$\text{cmHz}^{1/2}/\text{W}$	$\lambda=\lambda_p$

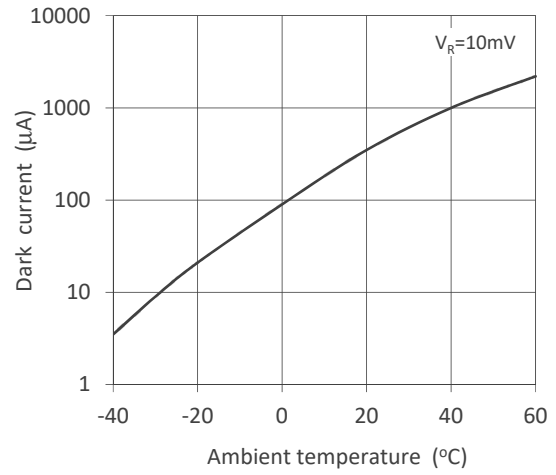
- Chip temperature $T_{PD}=-20^{\circ}\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Cutoff wavelength	λ_c	-	3.4	-	μm	
Peak sensitive wavelength	λ_p	-	3.2	-	μm	
Responsivity	R	1.2	1.4	-	A/W	$\lambda=\lambda_p$
Shunt resistance	R_{sh}	300	380	-	Ω	
Ditectivity	D^*	1.4×10^{10}	1.7×10^{10}	-	$\text{cmHz}^{1/2}/\text{W}$	$\lambda=\lambda_p$

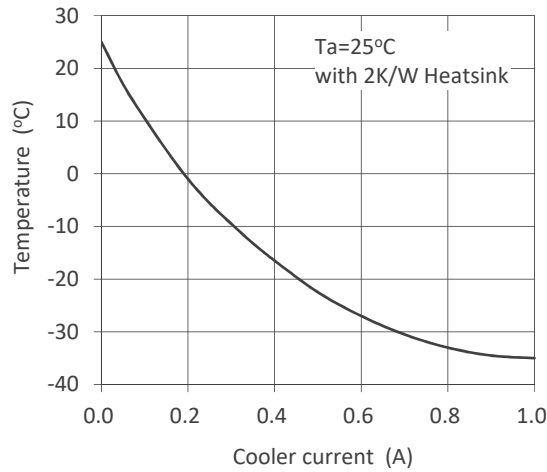
Spectral Responsivity



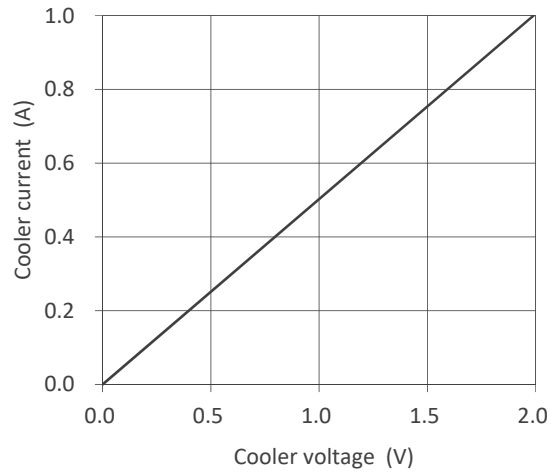
Dark Current - Ambient Temperature



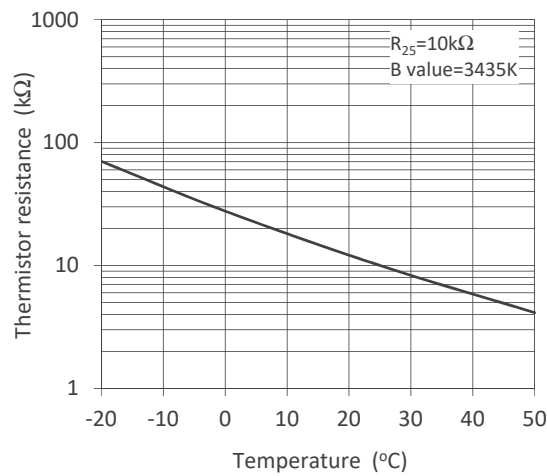
TEC Temperature - Current



TEC Current - Voltage



Thermistor Resistance - Temperature



- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (2011/65/EU).



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