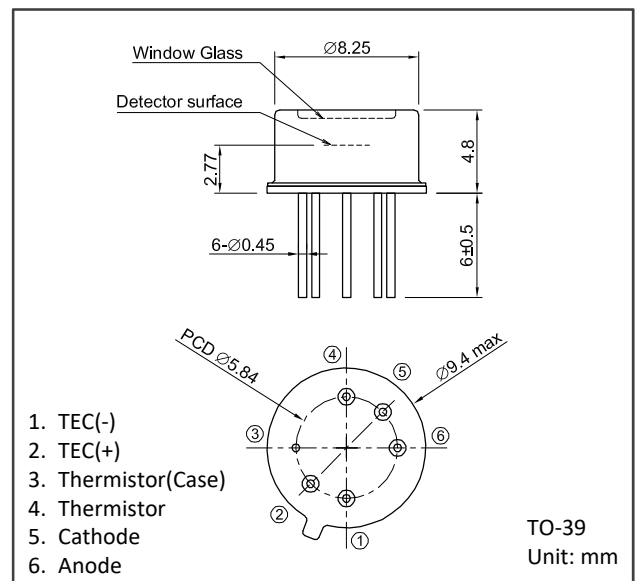


### Features

- $\phi 1.0$ 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)

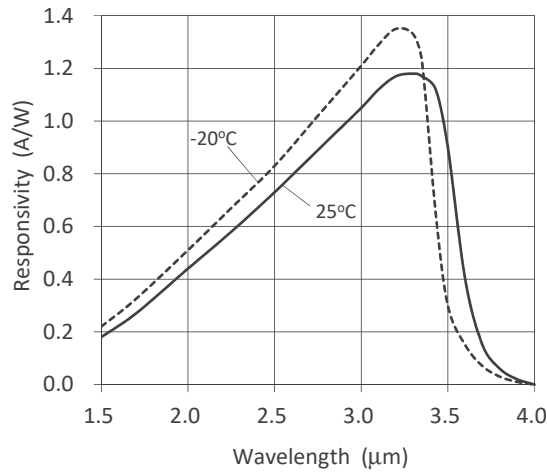
- Chip temperature  $T_{PD}=25^{\circ}\text{C}$

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

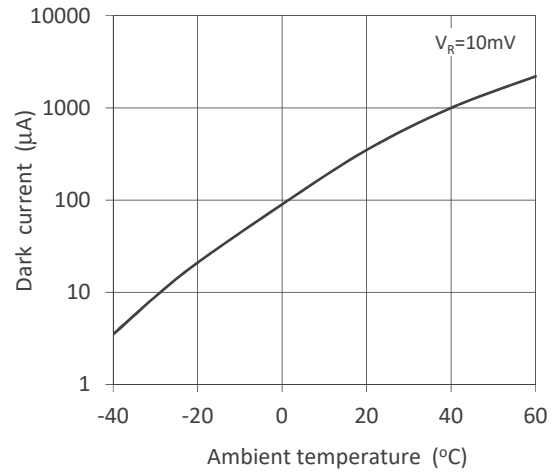
- Chip temperature  $T_{PD}=-20^{\circ}\text{C}$

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

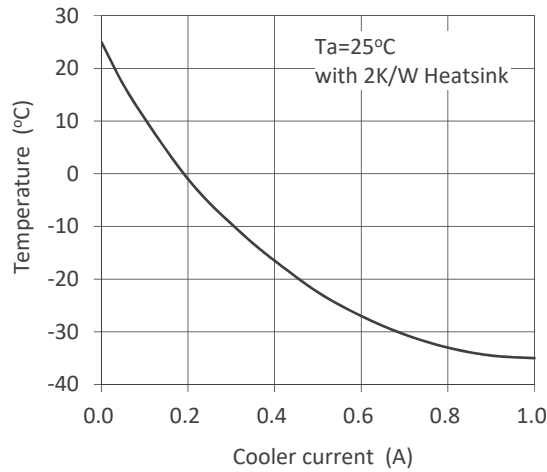
**Spectral Responsivity**



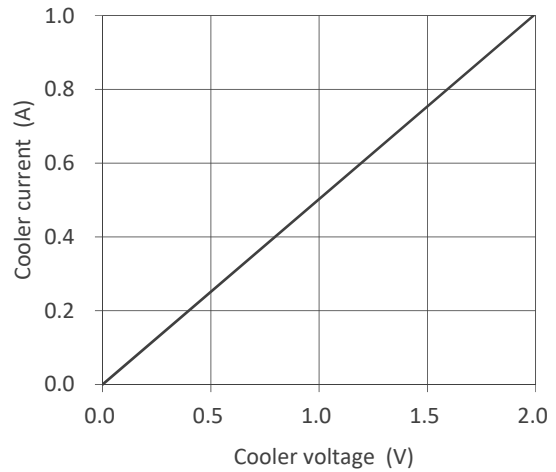
**Dark Current - Ambient Temperature**



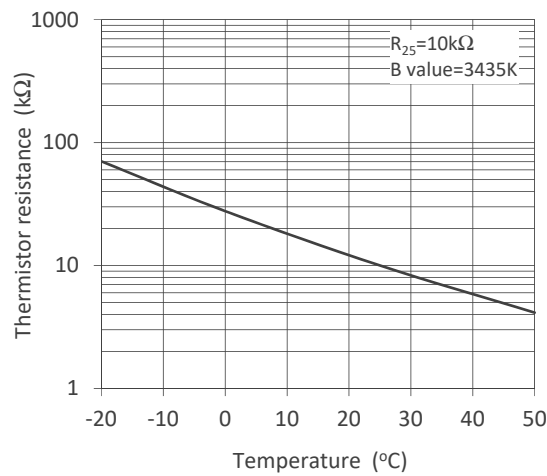
**TEC Temperature - Current**



**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).



**Opto-technologies for the Future**

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