

Si Phototransistors

KPT811H3

Characteristics

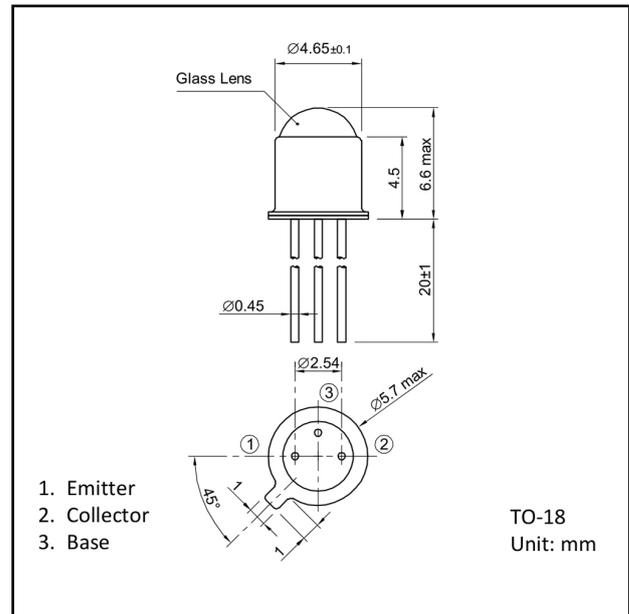
- NPN phototransistor packaged in a 3 leads TO-18 for base connection
- Hermetic seal with a glass lens
- Low leak current

Applications

- Optical switches
- Optical encoders
- Photo-isolators
- Camera stroboscopes
- Infrared sensors
- Automatic control apparatus

Package

- TO-CAN



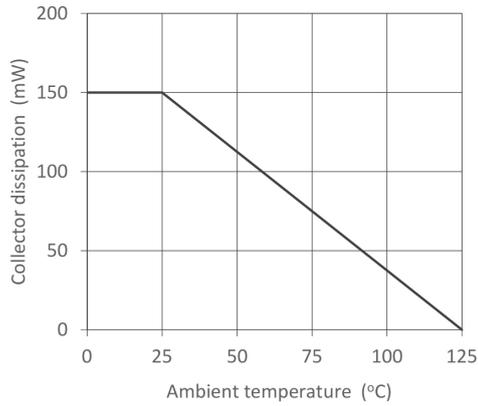
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
APD Reverse Collector-emitter voltage	V_{CEO}	20	V	-
APD Reverse Emitter-collector voltage	V_{ECO}	5	V	-
APD Reverse Collector-base voltage	V_{CBO}	30	V	-
APD Reverse Emitter-base voltage	V_{EBO}	5	V	-
Collector current	I_C	30	mA	$V_{CE}=5V$
Collector dissipation	P_D	125	mW	-
Operating temperature	T_{opr}	-25 to +125		Avoid dew condensation
Storage temperature	T_{stg}	-55 to +150		Avoid dew condensation
Soldering temperature	T_{sol}	260		Max 5 sec.

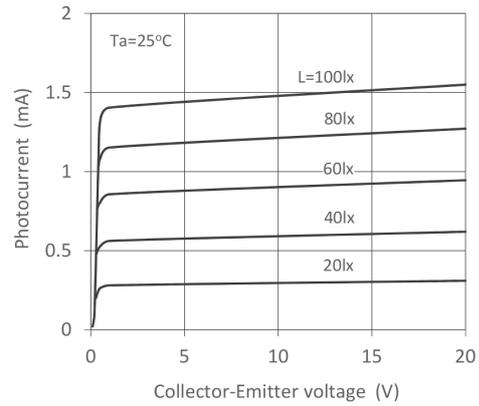
Electrical and Optical characteristics ($T_a=25$ $V_R=2V$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Sensitive size	S	-	0.64 × 0.64	-	mm ²	-
Sensitive wavelength		400	800(λ_p)	1000	nm	λ_p =Peak wavelength
Photocurrent	I_L	-	1.4	-	mA	$V_{CE}=5V$ 100lx(@2856K)
Dark current	I_{ceo}	-	5	200	nA	$V_{CE}=20V$
Half angle	2	-	17	-	deg.	-
Current amplification factor	h_{FE}	250	-	-	-	$V_{CE}=5V$ $I_C=2mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C=0.1mA$ 100lx(@2856K)
Rise/Fall Time	t_r t_f	-	5	-	μS	$V_{CE}=5V$ $I_C=2mA$ $R_L=100$

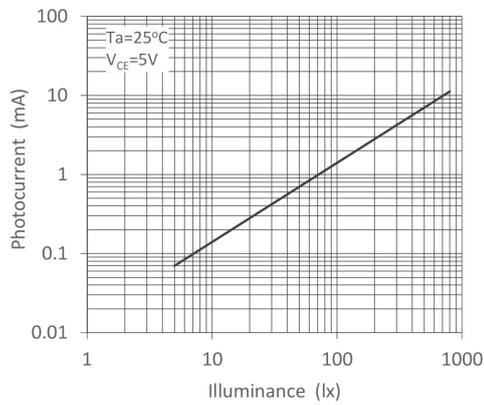
Collector Dissipation - Ambient Temperature



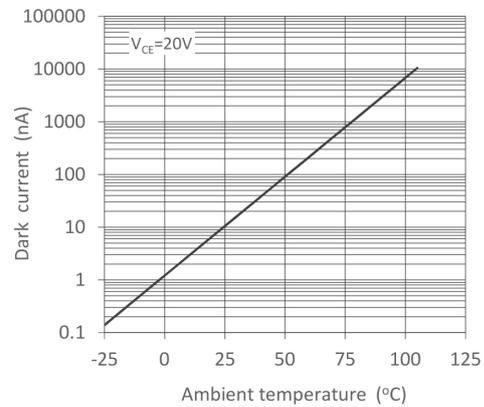
Photocurrent - Collector-Emitter Voltage



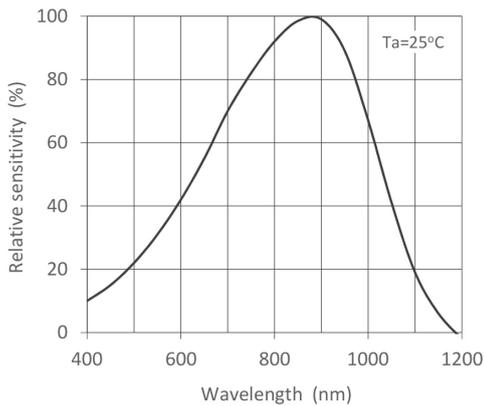
Photocurrent - Illuminance



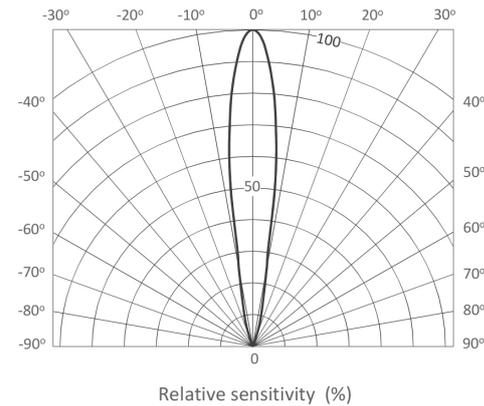
Dark Current - Ambient Temperature



Spectral Responsivity



Directivity



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