OKI electronic components

T35L

Silicon Planar Phototransistor

GENERAL DESCRIPTION

The planar structure of the T35L silicon phototransistor provides a high degree of sensitivity. High reliability is ensured by a hermetically sealed TO-18 package.

FEATURES

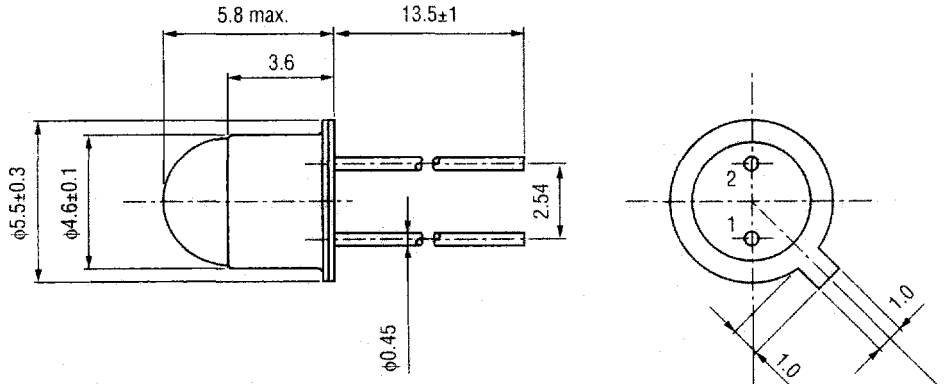
- Silicon planar technology applied in design allows detection of microscopic amounts of light
- High sensitivity
- TO-18 package for ease of handiling

APPLICATIONS

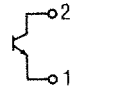
- For photoelectric transducer, switching, logic circuits and control

PACKAGE DIMENSIONS

(Unit: mm)



• Pin Connection Diagram



1: Emitter

2: Collector

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Condition	Rating	Unit
Collector-emitter Voltage	V_{CEO}	Ta=25°C	20	V
Emitter-collector Voltage	V_{ECO}		5	V
Collector Current	I_C		20	mA
Power Dissipation	P_C		150	mW
Operating Temperature	T_{opr}	—	−40 to +100	°C
Storage Temperature	T_{stg}	—	−55 to +125	°C

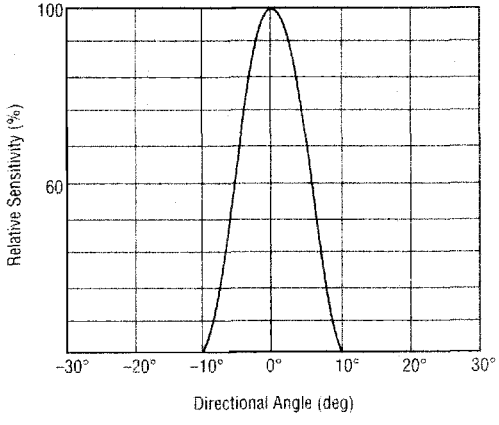
ELECTRICAL AND OPTICAL CHARACTERISTICS

(Ambient Temperature Ta=25°C)

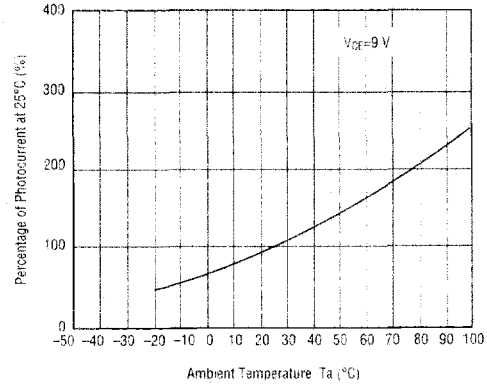
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=100 μA	20	—	—	V
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C=5 mA Standard Illuminant A=1000 ℓ_X	—	0.2	0.4	V
Dark Current	I_D	V_{CE}=9 V	—	—	100	nA
Photocurrent	I_L	V_{CE}=9 V Standard Illuminant A=100 ℓ_X	1000	—	—	μA

TYPICAL CHARACTERISTICS

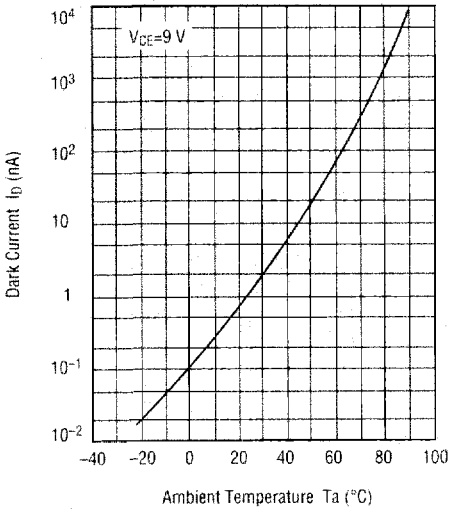
- **Directional Characteristics**



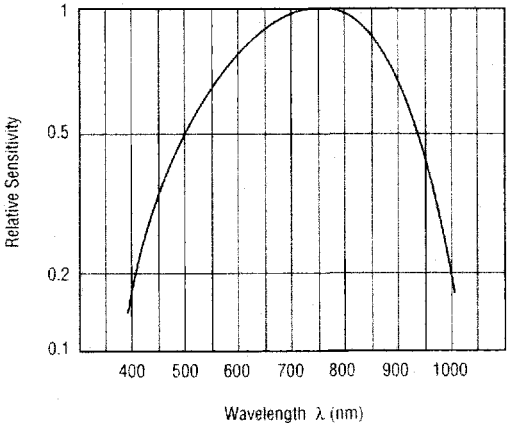
- **Photocurrent vs. Ambient Temperature (V_{CE}=9 V)**



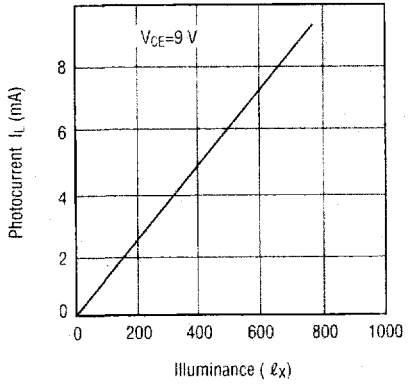
- **Dark Current vs. Ambient Temperature**



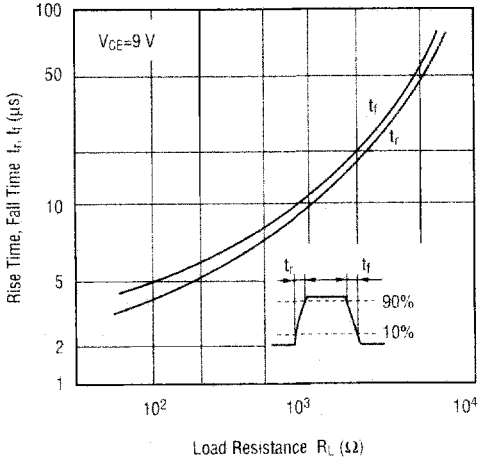
- **Spectral Sensitivity (Ta=25°C)**



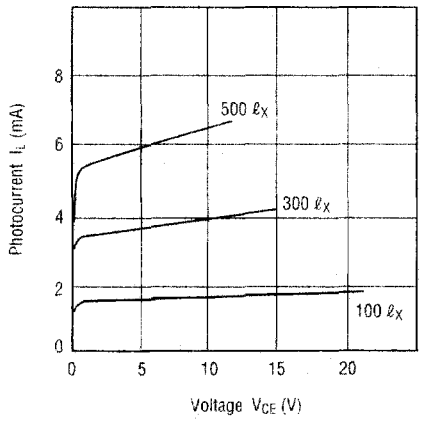
- **Photocurrent vs. Illuminance (Ta=25°C)**



- **Rise Time, Fall Time vs. Load Resistance (Ta=25°C)**



- **Photocurrent vs. Voltage (Ta=25°C)**



- **Dark Current vs. Voltage (Ta=25°C)**