



KDT00030 Phototransistor Photo Detector

Features

- Spectral response close to human eye
- Good output linearity across wide illumination range
- Small footprint: 1.7mm x 0.8mm
- Low profile: 0.6mm
- Phototransistor with filter technology

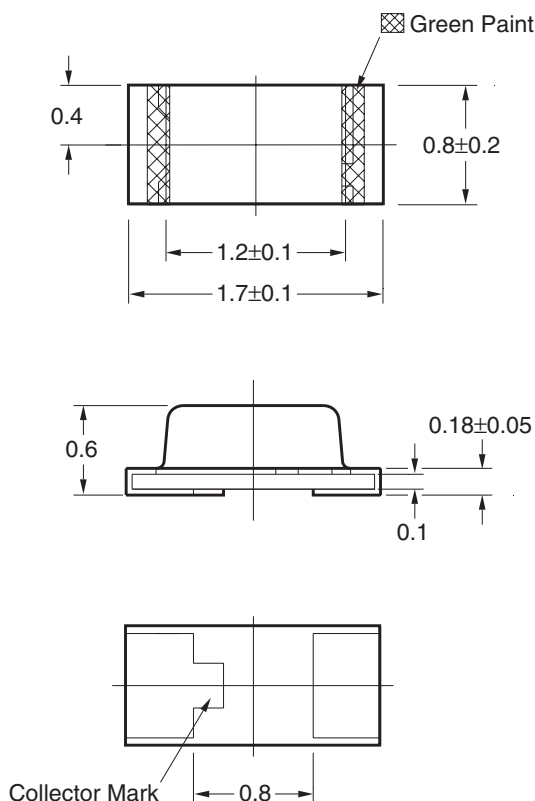
Applications

- Cell Phones, Notebook PCs, PDAs, Digital Still Cameras

Description

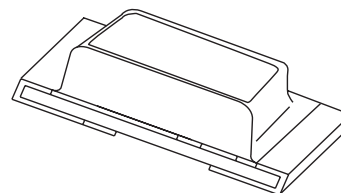
The KDT00030 is a small, low profile photo detector. It incorporates a phototransistor detector chip which makes it an ideal choice for low cost ambient light measurement applications like mobile appliances backlighting.

Package Dimension

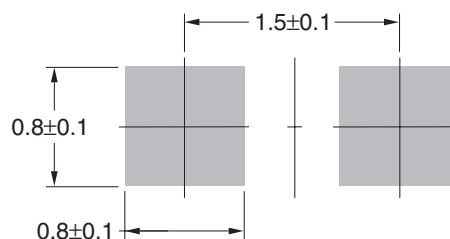


Note:

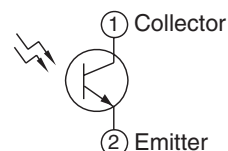
All dimensions are in mm, tolerances are ±0.1mm unless otherwise specified.



Recommended Solder Screen Pattern (for reference only)



Schematic



Absolute Maximum Ratings

Symbol	Parameter	Min.	Max.	Unit
V_{CE}	Collector-Emitter Voltage		60	V
T_{OPR}	Operating Temperature	-40	+85	°C
T_{STG}	Storage Temperature	-40	+100	°C

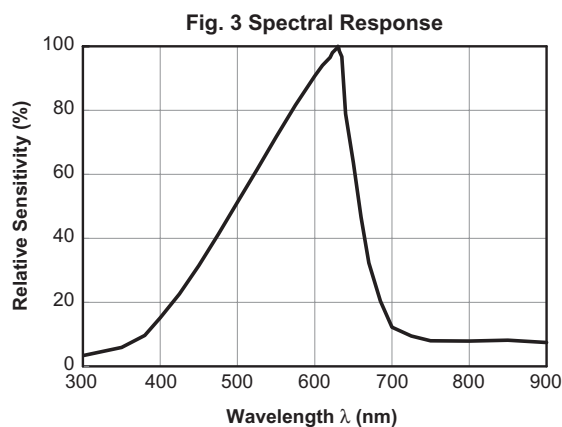
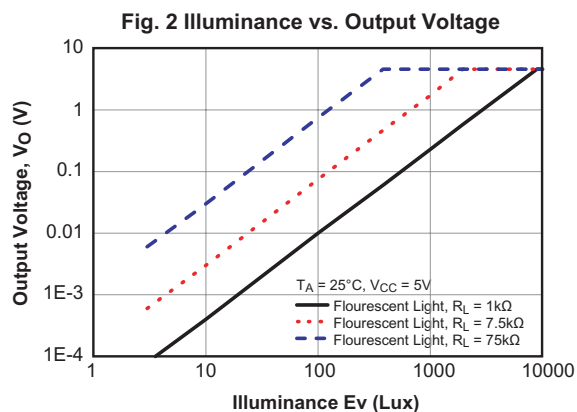
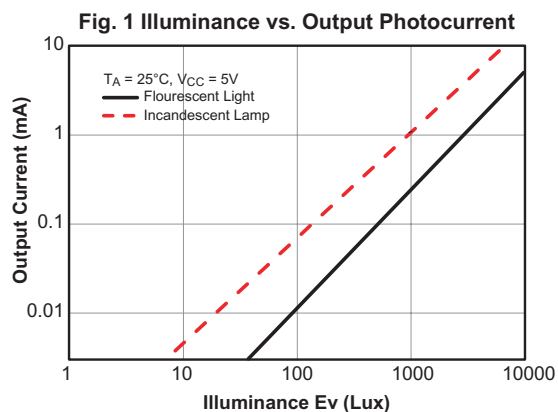
Electrical/Optical Characteristics ($T_A = 25^\circ\text{C}$ and $V_{CE} = 5.0\text{V}$, unless specified otherwise)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
$I_L(1)$	Light Current (1)	$E_V = 100 \text{ Lx}^{(1)}$	7	10		μA
$I_L(2)$	Light Current (2)	$E_V = 1,000 \text{ Lx}^{(1)}$	200	230		μA
$I_L(3)$	Light Current (3)	$E_V = 1,000 \text{ Lx}^{(2)}$	950	1,100		μA
$I_L(3) / I_L(2)$	Light Current Ratio			4.8		
I_{LEAK}	Dark Current	$V_{CE} = 10\text{V}, E_V = 0$			0.1	μA
V_O	Saturation Output Voltage	$V_{CC} = 5\text{V}, E_V = 1000 \text{ Lx}, R_L = 75\text{k}\Omega$	4.5	4.6		V
λ_P	Peak Sensitivity, Wavelength			630		nm

Notes:

1. White fluorescent light (color temperature = 6,500K)
2. Illuminance by CIE standard illuminant-A / 2856K incandescent lamp.

Typical Performance Characteristics





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Rev. I31