

NEW PRODUCT

KODENSHI

Touch Screen 용 Infrared LED & Photo Transistor 개발

Description

The KEL-0315C is a ultra bright light & surface mount type infrared emitting diode. And the KST-0315A is a high-sensitivity and surface mount type silicon phototransistor. They're ideal for various kinds of optical transistor such as touch panels for ATM, Car navigation system and even AV Instrument and various types of disk driver.



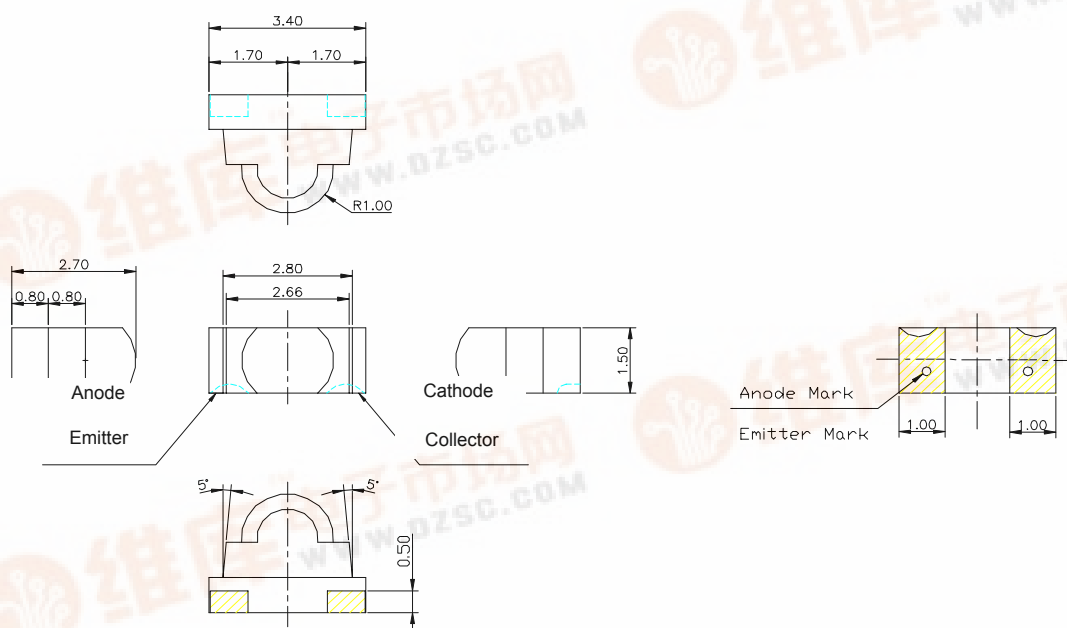
Features

- High Power & High Sensitivity
- SMD Type
- Lead-free & High Reliability Package
- RoHS Compliance

Application

- Touch Screen for ATM
- Touch Screen for Car Navigation System
- Touch Screen for Horse Racing Game Unit

Outline Dimensions



■ KEL-0315C

▶ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	6	V
Forward Current	I_F	50	mA
Power Dissipation	P_D	75	mW
Operating Temperature	T_{opr}	-20~+85	°C
Storage Temperature	T_{stg}	-30~+85	°C
Soldering Temperature*1	T_{sol}	245	°C

*1 : MAX 5s

▶ ELECTRO- OPTICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$	-	1.2	1.4	V
Reverse Current	I_R	$V_R=3\text{V}$	-	-	10	μA
Radiant Intensity	P_O	$I_F=20\text{mA}$	-	2.5	-	mW/sr
Peak Emission Wavelength	λ_p	$I_F=20\text{mA}$	-	940	-	nm
Spectral Bandwidth 50%	$\Delta\lambda$	$I_F=20\text{mA}$	-	45	-	nm
Half Angle	$\Delta\theta$	-	-	± 15	-	deg

■ KST-0315A

▶ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	35	V
Emitter-Collector Voltage	V_{ECO}	6	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	75	mV
Operating Temperature	T_{opr}	-20~+85	°C
Storage Temperature	T_{stg}	-30~+85	°C
Soldering Temperature*1	T_{sol}	245	°C

*1 : MAX 5s

▶ ELECTRO- OPTICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Dark Current	I_{CEO}	$E_e=0, V_{CE}=20\text{V}$	-	1.0	-	nA	
Collector Current	I_C	$E_e=1\text{mW/cm}^2, V_{CE}=5\text{V}$	-	1.0	-	mA	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$E_e=10\text{mW/cm}^2, I_C=0.8\text{mA}$	-	0.15	0.4	V	
Collector-Emitter Breakdown Voltage	B_{VCEO}	$E_e=0, I_{CE}=0.1\text{mA}$	35	90	-	V	
Emitter-Collector Breakdown Voltage	B_{VECO}	$E_e=0, I_{EC}=0.01\text{mA}$	6	7.5	-	V	
Spectral Sensitivity	λ	-	700	-	1050	nm	
Peak Sensitivity Wavelength	λ_p	-	-	880	-	nm	
Switching Time	Rise Time	T_r	$V_{CE}=2\text{V}, I_C=2\text{mA}, R_L=100\Omega$		-	15.0	μs
	Fall Time	T_f	-	-	-	15.0	μs
Half Intensity Angle	$\Delta\theta$	-	-	± 15	-	deg	