

# NEW PRODUCT



## 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.



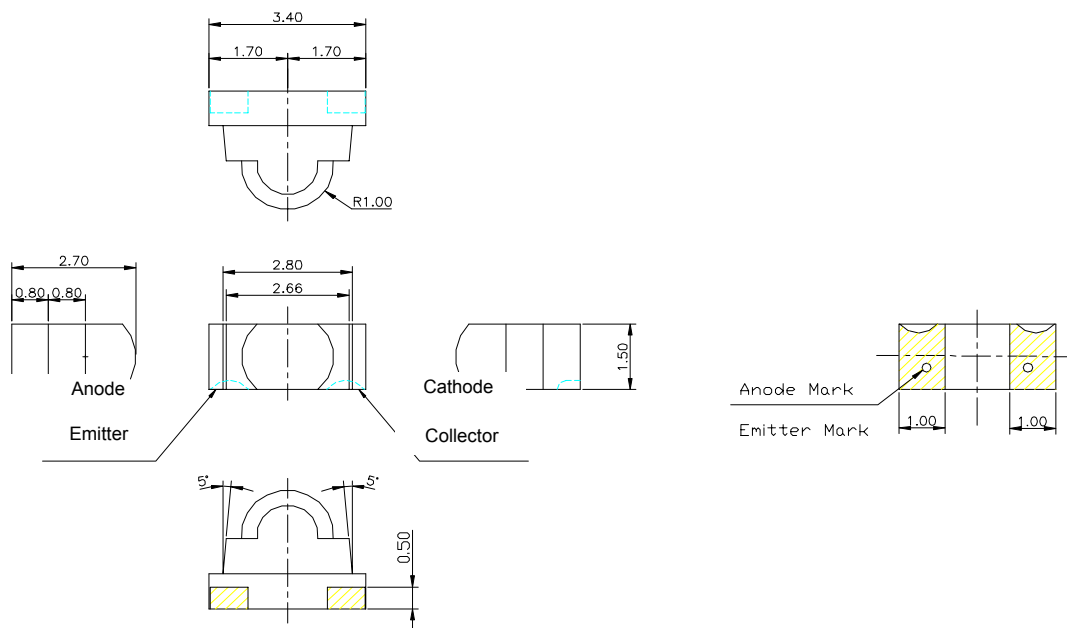
### Features

- 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	$\mu\text{A}$
Radiant Intensity	$P_O$	$I_F=20\text{mA}$	-	2.5	-	mW/sr
Peak Emission Wavelength	$\lambda_p$	$I_F=20\text{mA}$	-	940	-	nm
Spectral Bandwidth 50%	$\Delta\lambda$	$I_F=20\text{mA}$	-	45	-	nm
Half Angle	$\Delta\theta$	-	-	$\pm 15$	-	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	$\lambda$	-	700	-	1050	nm	
Peak Sensitivity Wavelength	$\lambda_p$	-	-	880	-	nm	
Switching Time	Rise Time	$T_r$	$V_{CE}=2\text{V}, I_C=2\text{mA}, R_L=100\Omega$		-	15.0	$\mu\text{s}$
	Fall Time	$T_f$	-	15.0	-	$\mu\text{s}$	
Half Intensity Angle	$\Delta\theta$	-	-	$\pm 15$	-	deg	