



## Stanley Electric's Photorelector Sensor

**Long lifetime, high reliability  
enabled through contactless sensing**

**Suitable for high operating temperature (Max. 100 °C) usage**

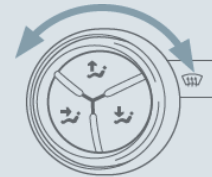
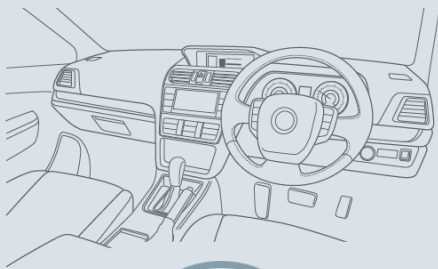
**Two types available, depending on the detection distance and reflective object**

KUA0121C  
KUA0121D



### ◆ Applications

#### Automotive interior equipment

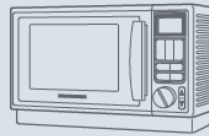


Rotary dial switches

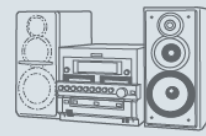


Scroll switches

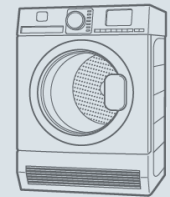
#### Home appliances



Microwaves



Audio components

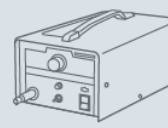


Washing machines

#### Industrial equipment



Factory automation  
control panels



Control devices



Card readers

### ◆ Features

#### ● Contactless sensing

Increased flexibility of design compared to mechanical sensors  
Sensing through IR LED emission and photodetector detection  
Short range detection (max. 1 to 2 mm)

#### ● Compact size (1.1 mm height)

Downsizing of final unit  
Component cost reduction

#### ● Compatible with JEDEC MSL 2a

### ◆ Specifications



Part name		KUA0121C	KUA0121D	Units
Peak wavelength	$\lambda_p$	940	855	nm
Photocurrent ( $V_{CE}=5V, I = 5mA, d=1mm$ )	$I_C$	300	1,450	$\mu A$
Leakage current ( $V_{CE}=5V, I = 5mA, \text{no reflector}$ )	$I_{LEAK}$	Max. 2	Max. 5	$\mu A$
Response time ( $V_{CE}=10V, RL=100\Omega$ )	tr/tf	10 / 10	6 / 8	$\mu sec$
Operating temperature	$T_{opr}$	-40~+100		$^{\circ}C$
Storage temperature	$T_{stg}$	-40~+120		$^{\circ}C$
Size	L×W×H	3.6 × 1.9 × 1.1		mm
JEDEC MSL	—	2a		—

Conditions :  $T_a=25^{\circ}C$

