

# KME-M001C

The KME-M001C UV Sensor combines a High Power UV LED with LTV Sensor, Band pass filter.

## FEATURES

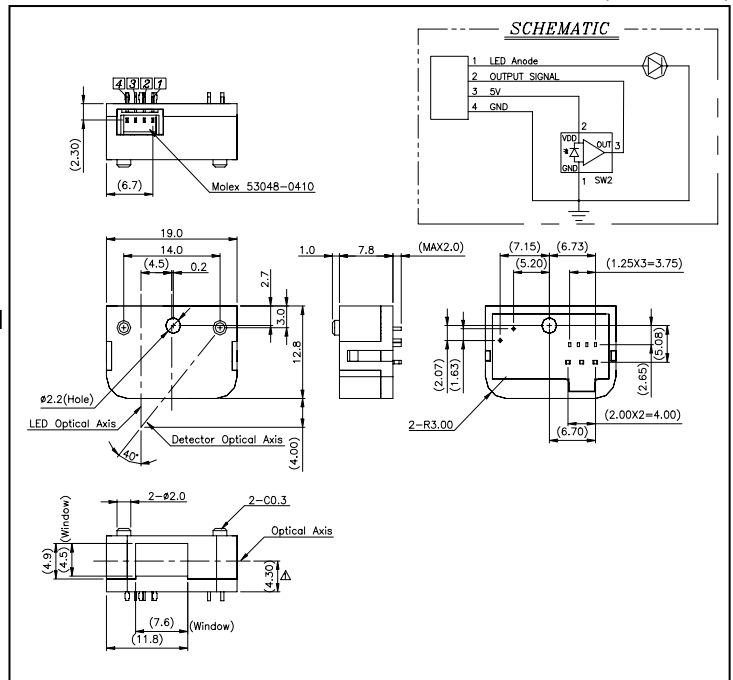
- Difficult for dust and debris to come onto element
- Easy equipping
- Detection of the Existence for a Fluorescent Material

## APPLICATIONS

- ATM
- Vending Machine
- etc

## DIMENSION

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Rating	Unit	
Input	Power Dissipation	$P_D$	60	mW
	Forward Current	$I_F$	25	mA
	Peak Forward Current <sup>(1)</sup>	$I_{FP}$	80	mA
	Reverse Current	$I_R$	60	mA
Output	Supply Voltage	$V_{DD}$	6	V
	Output Current	$I_O$	10	mA
Operating Temperature		$T_{opr}$	-20 ~ 75	°C
Storage Temperature Range		$T_{stg}$	-25 ~ 85	°C
ESD Withstand Voltage (Human Body Model)		$V_{ESD}$	±2.0	kV

Note 1. Pulse width ≤ 500usec ; Duty factor : 1%

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward Voltage	$I_F=20mA$	-	3.5	4.0	V
	Peak Wavelength	$I_F=20mA$	-	375	-	nm
Output	Supply Voltage	-	4.5	5.0	5.5	V
	Dark Voltage	$E_e=0$	0	-	15	mV
	Maximum Output Voltage	$V_{DD}=4.5V$	-	4.49	-	V
Transmission	Forward Current	$L=4mm, V_{DD}=5V,$ $V_{TAR}^{(2)}=4.5V,$ Fluorescent Paper	2	-	20	mA
	Low Level Output Voltage	$L=4mm, V_{DD}=5V,$ $I_{TAR}^{(3)},$ Non- Fluorescent Paper	-	-	1	V
Response Time	Rise Time		-	160	-	μs
	Fall Time		-	150	-	μs

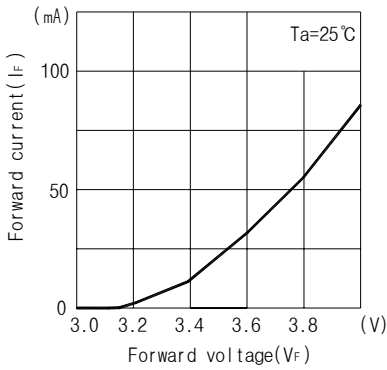
Note 2.  $V_{TAR}$  = Target Voltage = 4.5V

Note 3.  $I_{TAR}$  =  $I_F$  (Forward Current) when  $V_{TAR}$

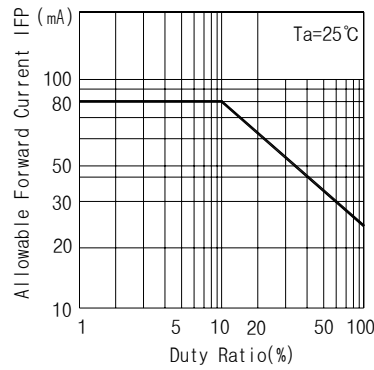
Note 4. Fluorescent Paper = HP Bright white inkjet paper (C5977B)

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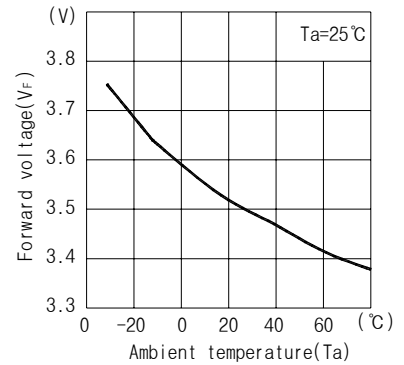
Forward current Vs. Forward voltage



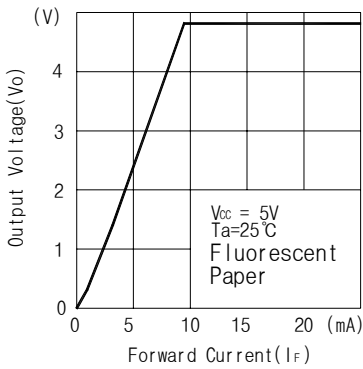
Duty Ratio Vs. Allowable Forward Current



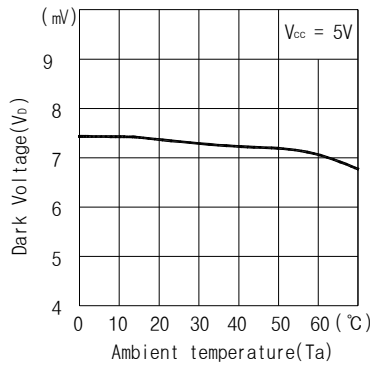
Relative Collector Current Vs. Ambient temperature



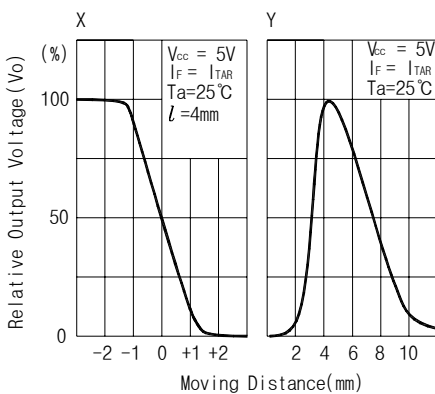
Output Voltage Vs. Forward Current



Ambient temperature



Relative Output Voltage Vs. Moving distance



Method of measuring position detection characteristic

