

## Photodiode array chip FM034MP.01

### Description

FM034MP.01 chip is fabricated using Silicon Bipolar process technology. The chip is designed to be used in MOS-relay. Consists of 14 photodiodes that allows controlling MOSFET chips with threshold voltage 1-2 V.

New monolith polysilicon structure.

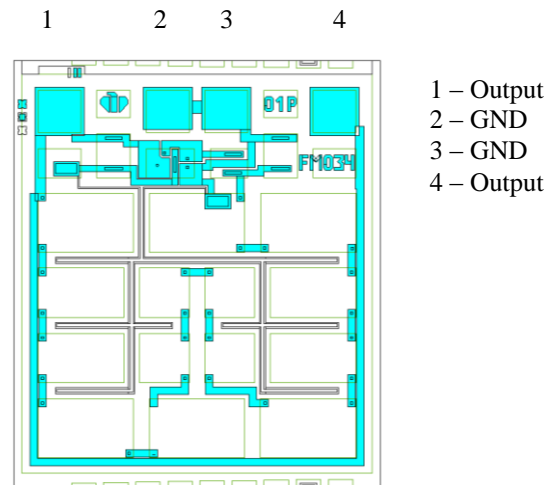
No delamination at high temperatures.

### Features

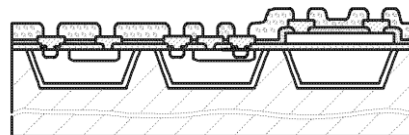
- 14 photodiodes
- Thyristor discharge circuit
- Contact pad's material - Aluminium
- Chip size  $1.2 \times 1.4 \pm 0.1$  mm
- Chip thickness  $0.32 \pm 0.02$  mm

### Absolute maximum ratings

Storage temperature	- 65 °C to 150 °C
Operating Junction Temperature	- 55 °C to 125 °C



Cross section view



### Electrical characteristics (T = 25 °C)

Parameter	Symbol	Unit	Min.	Typ.	Max.	Condition
Open Circuit Voltage	$V_{OC}$	V	7.0	7.8	-	1
Short Circuit Current	$I_{SC}$	$\mu A$	3.4	4.2	-	1
Output Voltage	$V_{OUT}$	V	-	-	0.9	2
Discharge Resistor	$R_{DIS}$	MOhm	5.0	-	25.0	
Turn-On Time	$T_{ON}$	ms	-	1.0	-	3
Turn-Off Time	$T_{ON}$	ms	-	0.2	-	

1 – Light source with peak wavelength  $\lambda = 850 \pm 20$  nm that provides surface irradiance  $E_e = 20$  mWt/cm<sup>2</sup>

2 – No light.  $I_F = 100$   $\mu A$

3 – Typical value at  $I_{LED} = 10$  mA,  $C_L = 250$  pF. Coupled with LED  $\Phi_e = 1400$   $\mu W$  with peak wavelength  $\lambda = 850 \pm 20$  nm.