

SHARP

GA100TX02MZ

GA100T802MZ

Under development	
New product	●

OPIC Light Detector

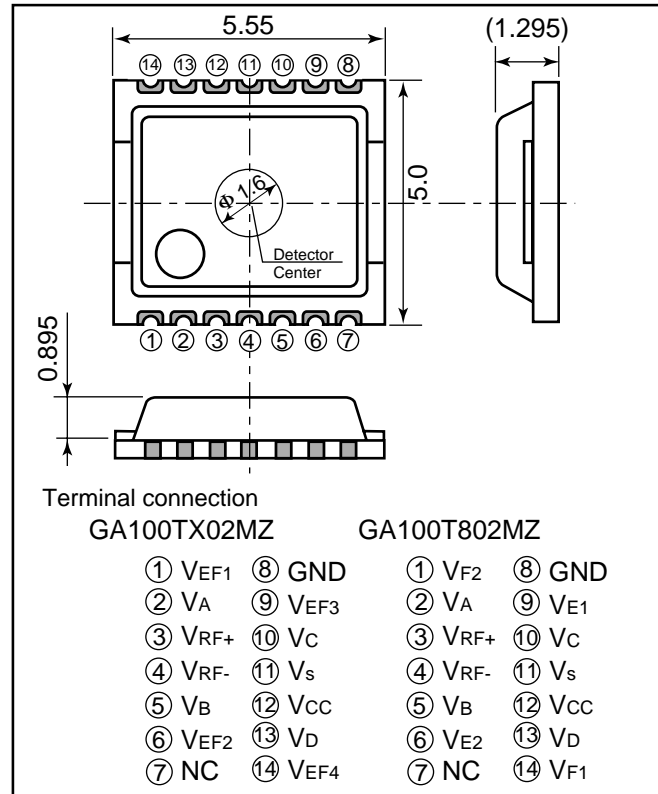
OPIC Light Detector for x16 Speed DVD-ROM

■ Features

- (1) OPIC light detector with built-in RF amplifier
(Integrates PIN photodiode and Amp. IC onto a single chip)
GA100TX02MZ : 12-division PD
GA100T802MZ : 8-division PD
- (2) High speed response
(Response frequency : MIN. 90 MHz)
- (3) Built-in capacitor for power supply bypass
- (4) Can read various discs such as DVD,
DVD-ROM, DVD-RAM, DVD-R,
CD-ROM, CD-R, CD-RW
- (5) High sensitivity
- (6) Surface mount-leadless package
(Package dimensions : 5.0 x 5.55 x 1.295mm)
- (7) Applicable for reflow

■ Outline Dimensions

(Unit:mm)



■ Applications

- (1) DVD-ROM drives
- (2) DVD players

* "OPIC" (Optical IC) is a trademark of SHARP Corporation.
An OPIC consists of a light-detecting element and a signal-processing circuit integrated onto a single chip.

■ Specifications

(Ta=25°C)

Parameter	Symbol	Characteristics		Condition
		Input wavelength 650 nm	Input wavelength 780 nm	
Supply voltage	Vcc	4.75 to 5.25 V		-
Extremes of off-set voltage	ΔV_{od}	MAX. ± 25 mW		-
Sensitivity(A,B,C,D)	RP1	TYP. 22.9 mV/ μ W	TYP. 24.6 mV/ μ W	-
Sensitivity(RF)	RP2	TYP. 14.1 mV/ μ W	TYP. 15.2 mV/ μ W	-
Response frequency	fc(RF)	MIN. 90 MHz	MIN. 70 MHz	- 3 dB
Output noise level	Vn(RF)	TYP. - 76 dBm		f=72MHz,BW=30 kHz
Operating temperature	Topr	- 10 to + 80°C		-

(Notice)

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(Internet)

•Data for Sharp's optoelectronic/power devices is provided on internet. (Address <http://www.sharp.co.jp/ecg/>)

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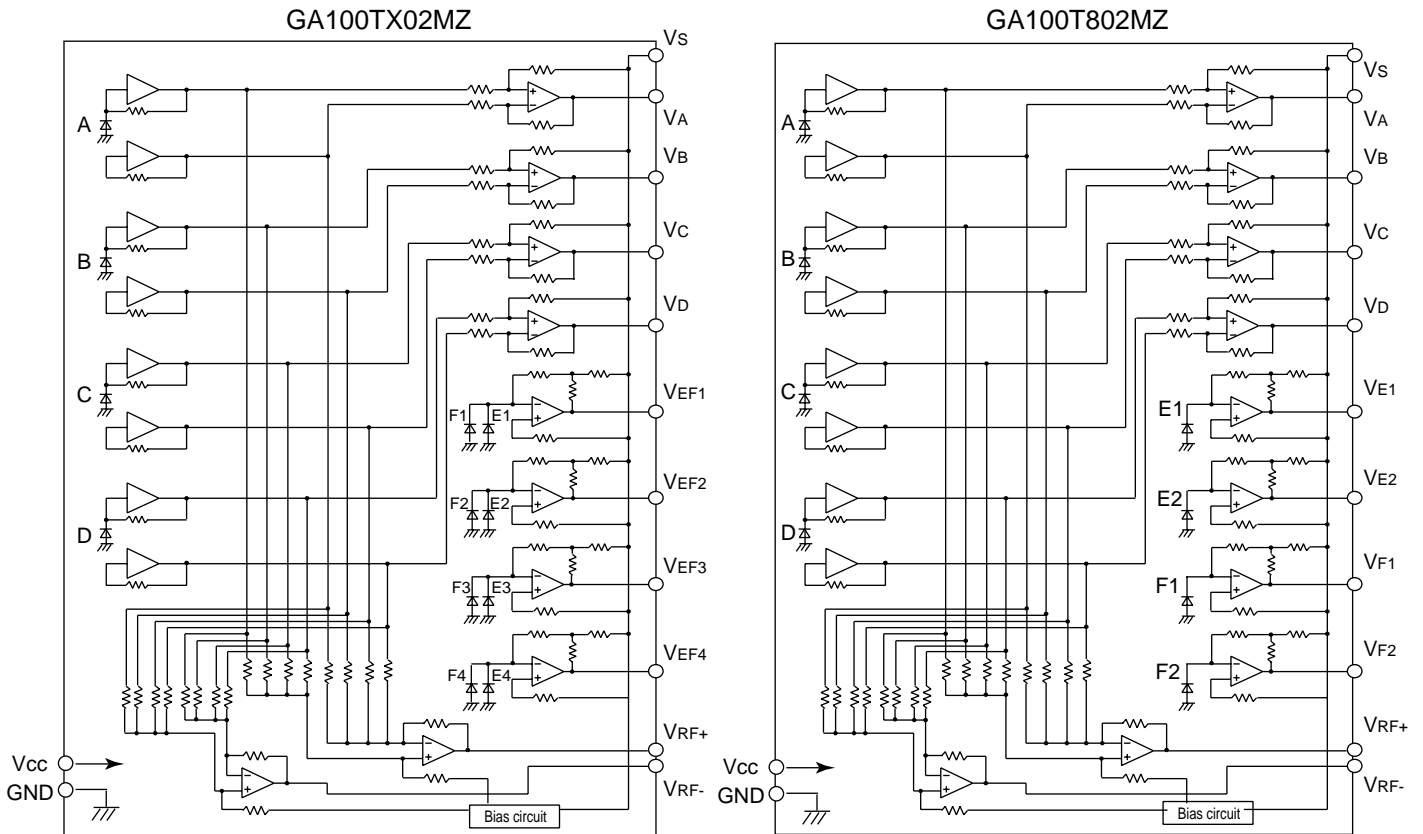
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OPIC Light Detector

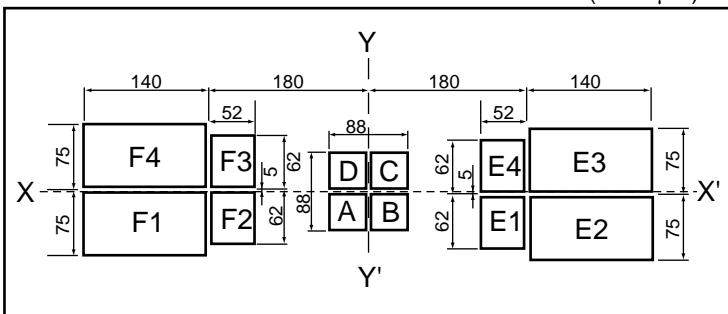
Internal Block Diagram



Detecting Pattern of Photodiode

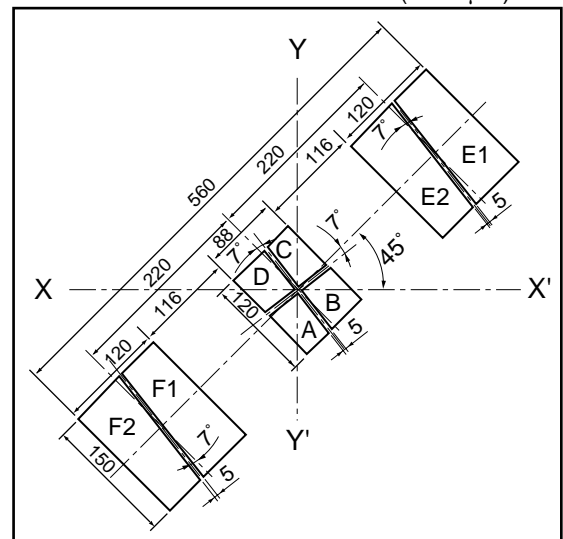
GA100TX02MZ

(Unit : μm)



GA100T802MZ

(Unit : μm)



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 - Industrial control
 - Audio visual equipment
 - Consumer electronics
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 - Traffic signals
 - Gas leakage sensor breakers
 - Alarm equipment
 - Various safety devices, etc.
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