

## SPECIFICATION

# MICROCHANNEL PLATE WITH SOLID BORDER MCP 18-8Y

Microchannel Plate is intended for operation in vacuum inside Image Intensifier Tubes as a multi-channel secondary-electron multiplier of electron images.

ALTERNATIVE SPECIFICATION MAY BE MADE ON CUSTOMER'S ORDER.

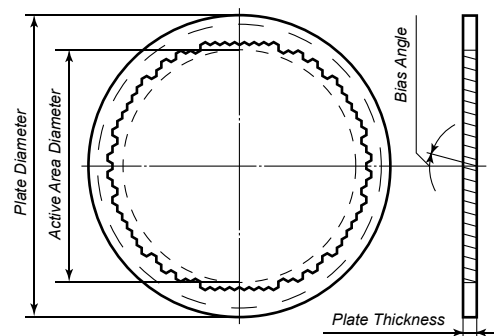
### SIZE-SHAPE FACTORS

PARAMETER	DIMENSION	VALUE
Plate Diameter	mm	24.8
Active Area Diameter	mm	min. 18.6
Plate Thickness	mm	0.32
Channel Diameter	$\mu\text{m}$	7.5
Center-to-Center Spacing	$\mu\text{m}$	9.5
Bias Angle	degree	12



### ELECTRICAL & IMAGE CHARACTERISTICS

PARAMETER	DIMENSION	VALUE
Electron Gain at 800 V	-	1000
Resistance	$\times 10^8$ Ohms	1 - 3
Minimum Limiting Resolution	lp/mm	64
Maximum Dark Current Density	$\times 10^{-14}$ A/cm <sup>2</sup>	1
Noise factor, typical value	-	2
Open Area Ratio	%	min. 59



**MTTF** (mean time to failure) : not less than 7500 hrs.

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	LIMITING VALUE
Operating Voltage	1000 V
Field Strength	14 KV/mm
Input Current Density	$1 \times 10^{-8}$ A/cm <sup>2</sup>
Output Current Density	$4 \times 10^{-7}$ A/cm <sup>2</sup>

**VACUUM BAKEOUT LIMITING TEMPERATURE:**  
410°C during not more than 6 hrs. at  $5 \times 10^{-6}$  torr.

### WARRANTIES

**Shelf-life:** the MCP shall be stored in container provided by the manufacturer during 6 months, in vacuum ( $1.33 \times 10^{-3}$  Pa) during 1 year or 15 years as a part of an image intensifier tube. The shelf-life is to be calculated from the acceptance date of manufacturer's quality inspection, and in a case of reacceptance from the reacceptance date.