

50 ns 10 KHz Gate Module

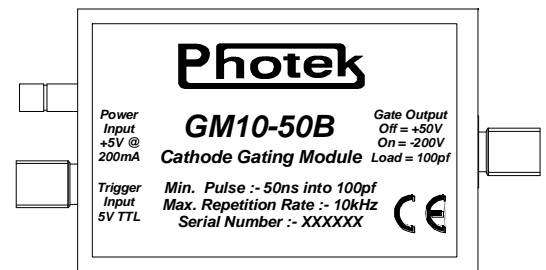
The GM10-50 module is a +5V d.c. powered 250V pulse amplifier for periodic operation of MCP devices by biasing the Cathode on and off for specific lengths of time.

This unit requires an external +5V/200mA power supply and +5V TTL input trigger pulse.

The GM10-50 is designed to gate 25mm and 40mm Image Intensifier devices with approximate capacitance between Cathode and MCPIN of 40-100pf.

The output pulse is directly related to the input pulse but will be delayed by approximately 120ns.

There is a pulse width loss across the GM10-50 between 10 and 30ns.



Operating Characteristics

The gate module is intended to connect directly to the cathode and MCP input of the device being gated by a short length of wire.

The cathode is biased at +50V nominal with respect to the first MCP and the detector is normally off (MCP In potential = 0V).

Activation of the gate module will drive the cathode -200V nominal. w.r.t. MCP In and thus turn the detector on.

The gate pulse drive required is 5V TTL. The GM 10-50 has an input impedance of 4k7.

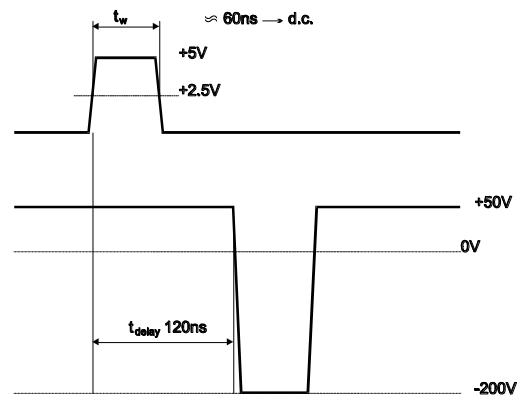
The propagation delay across the GM10-50 can be as much as 120ns, this is specific to each unit and if precise figures are required the unit must be measured.

The input pulse to output pulse relationship of the GM10-50 is illustrated below: -

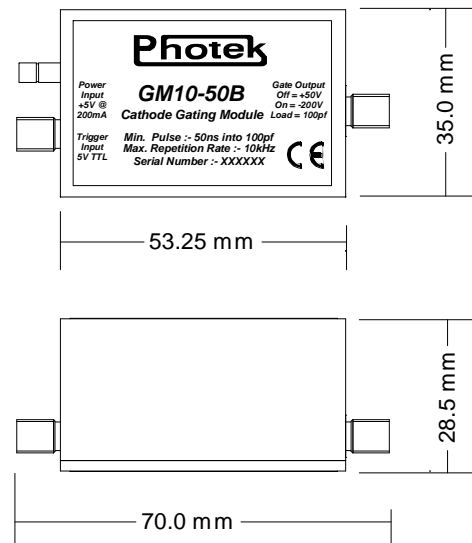
GM10-50B

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GM10-50 Pulse Characteristics		
	Minimum	Maximum
Input Pulse	60-80ns	D.C.
Output Pulse	50ns	D.C.
Pulse Width Loss	10ns	30ns
Propagation Delay	100ns	120ns
O/P Pulse Faltime	50ns	
O/P Pulse Risetime	50ns	
Off Voltage	40V	50V
On Voltage	180V	200V



GM10-50 Connectors		
Input Power		
SMB Socket	Center	+5V
	Screen	0V
Input Signal		
SMA Socket	Center	TTL Pulse
	Screen	0V
Output Signal		
SMA Socket	Center	HT Pulse
	Screen	0V



Items Supplied

- 1 off GM 10-50B Gating Module.
- 1 off Signal Cable – 1m BNC to SMA.
- 1 off Power Cable – 1m SMB to Bare Ends.

GM10-50B

Electrical Specifications		Mechanical Specifications	
Supply Voltage	+5V D.C.	Length	53.25mm
Supply Current (max)	200mA	Length (Incl. Connectors)	70.0mm
Input Drive Pulse	5V TTL	Width	35.0mm
Input Impedance	4.7kΩ	Height	28.5mm
Negative O/P Voltage Max.	-200V	Weight	67g
Positive O/P Voltage Max.	+50V		
Output Current Max.	3mA		
Output Pulse Min.	50ns	Operating Temperature Range	
Output Load Max.	100pF	Temperature Minimum	0°C
Operating Frequency Max.	10kHz	Temperature Maximum	70°C
Operating Frequency Min.	D.C. (On or Off)		

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