

GM300-3 Gate Module

Features

- Photocathode gate module
- 3 ns gate time (FWHM)
- 1 ns rise/fall time
- 300 KHz repetition rate
- Trigger input
- N version gated normally off
- P version gated normally on
- No drift at low repetition rate: PMT compatible



Parameters

	Minimum	Maximum
Gate Time T_g	3 ns FWHM*	Unlimited (D.C.)
Repetition Rate	0 Hz "Single Shot"	300 KHz global, 2.5 MHz burst mode
ON Voltage Output	-200 V	
OFF Voltage Output	+50 V	
Trigger Input	+3.2 V into 50 Ω	+5.5 V into 50 Ω
Power Supply	+10 V	+14 V
Quiescent Current @ +12 V	180 mA (1 A inrush current)	
Jitter	30 ps r.m.s.	
Maximum Capacitance Load	250 pF	
Minimum Resistance Load	10 M Ω	

*Actual gate time is dependent on the detector. This gate time is the minimum that the GM300-3 can provide.

Mechanical

	Housed	Bare PCB
Height	26 mm	13 mm
Width	56 mm	38 mm
Length	86 mm (106 mm including connectors)	80 mm (106 mm including connectors*)
Weight	115 g	45 g
Trigger Input Connector	SMA	
Power Supply Connector	SMB	
Gate Pulse Connector	SMA	

* Right-angled connectors would reduce the total length to 100 mm and enable easier access. Available on request.

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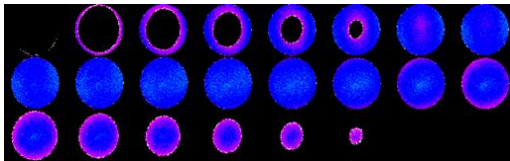
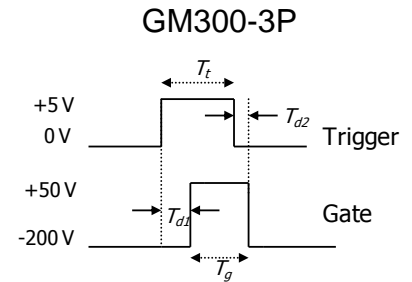
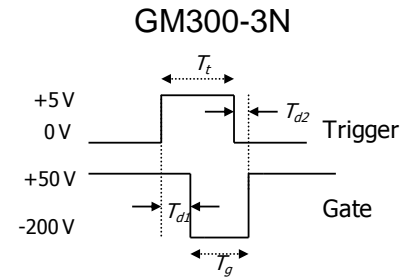
Datasheet DS024, Issue 01, Date 12 March 2012

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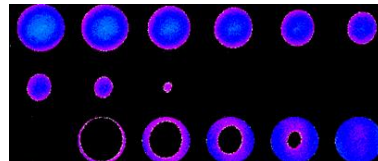
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Typical Timing Parameters

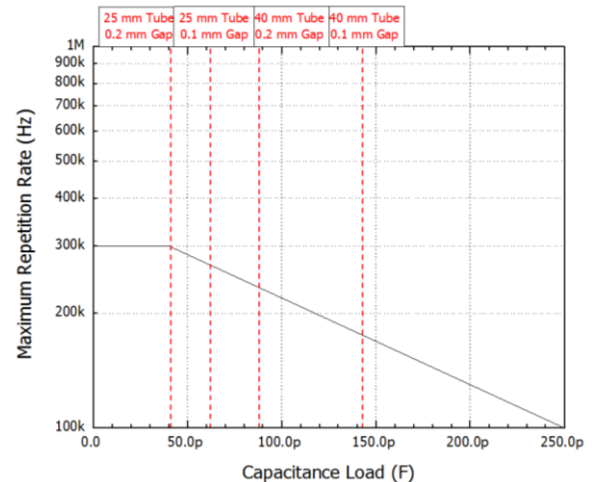
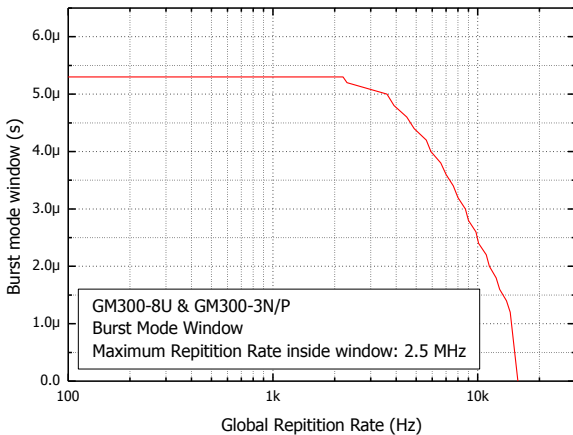
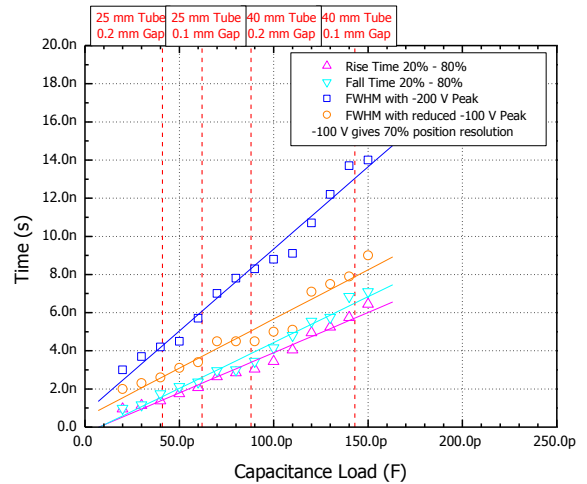
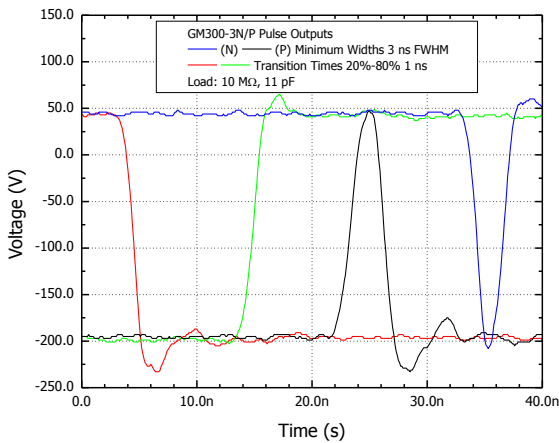
Leading Edge Propagation Delay	T_{d1}	50 ns
Trailing Edge Propagation Delay	T_{d2}	40 ns
Trigger / Gate Offset Time $T_t - T_g$	$T_{d1} - T_{d2}$	10 ns
Minimum Gate Width in Inverted Mode	T_g	50 ns
Propagation Delay Temperature Co-efficient		40 (± 5) ps / $^{\circ}\text{C}$
Gate Width Temperature Co-efficient		± 10 ps / $^{\circ}\text{C}$



GM300-3N Laser Walkthrough
200 ps/frame



GM300-3P Laser Walkthrough
200 ps/frame



Photek Ltd reserves the right to update and improve this specification without prior notice

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