

These charts are intended as selection guides only. For complete and precise specifications, consult the data sheet for each model.

Application Guide for Timing and Counting with Fast Discriminators

Application	Discriminator Model Number						
	CF8000	583B	584	935	9302	9307	9327
Scintillation Detectors	CFD	CFD SCA	CFD	CFD	AMP/LE		
Silicon Charged-Particle Detectors	CFD	CFD SCA	CFD	CFD	AMP/LE		
Microchannel Plates, Microchannel Plate PMTs, Channeltrons			LE	(CFD)	LE	pT	pT
Single-Photon Counting/Timing with Photomultiplier Tubes	CFD	CFD SCA	CFD	CFD	LE	pT	pT
Germanium Detectors	ARC	ARC SRT, SCA	ARC SRT	ARC			
Fast Photodiodes			LE	(CFD)	LE	pT	pT

Selection Guide for Fast Discriminators

Model	Number of Channels	Package Width	Max. Burst Rate	Pulse-Pair Resolving Time	Modes	Selectable Fractions	Shaping Delay	Special Notes
CF8000	8	NIM-1	20 MHz	50 ns	CFD, ARC	0.4	Internal, selectable	Auto-walk adjust, Special outputs
583B	1	NIM-1	20 MHz	50 ns	SCA, CFD, ARC, SRT, BKO	0.2	External cable	Upper and lower level discriminators
584	1	NIM-1	50 MHz	20 ns	CFD, ARC, SRT, LE, BKO	0.2	External cable	Min. threshold = 5 mV, Input gate
935	4	NIM-1	200 MHz	5 ns	CFD, ARC, (LE), BKO	0.2	External cable	Accepts input widths as short as 1 ns. Individual gates and common veto.
9302	1	NIM-1	100 MHz	10 ns	LE			Fast amplifier and LE discriminator. See Amplifier selection.
9307	1	NIM-1	100 MHz	10 ns	pT			Optimized for single photon and single ion timing with microchannel plate/PMTs.
9327	1	Preamp	100 MHz	10 ns	pT			Optimized for single photon and single ion timing with microchannel plate detectors. Also fast photodiodes and fast PMTs. Includes 1-GHz amplifier.

Codes:

AMP = Includes fast amplifier
 ARC = Amplitude and rise time compensated timing
 BKO = Blocking output
 CFD = Constant-fraction discriminator mode

LE = Leading-edge discriminator mode
 SCA = Single-channel analyzer (upper and lower level discriminators)
 SRT = Slow rise time rejection option
 pT = pico-Timing™ discriminator

Specifications subject to change
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