

25mm (1") photomultiplier L25D19 series data sheet



1 description

The L25D19 is a 25 mm (1") diameter, end window photomultiplier with a blue-green sensitive bialkali photocathode and 8 linear focused type dynodes.

2 applications

- scintillation counting

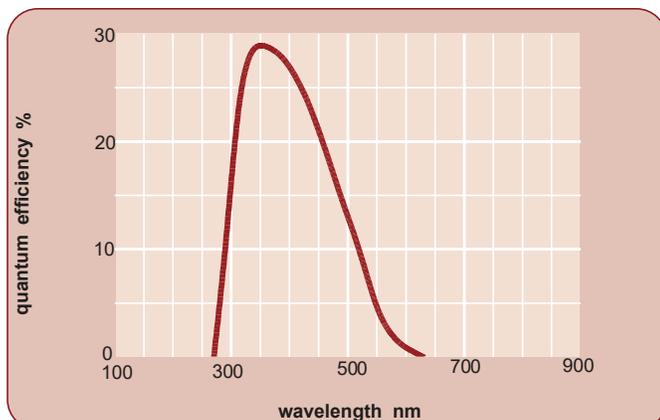
3 features

- fast time response
- good pulse height resolution

4 window characteristics

L25D19 hard glass	
spectral range*(nm)	290-630
refractive index (n)	1.49
K (ppm)	
Th (ppb)	(tbd)
U (ppb)	

5 typical spectral response curves

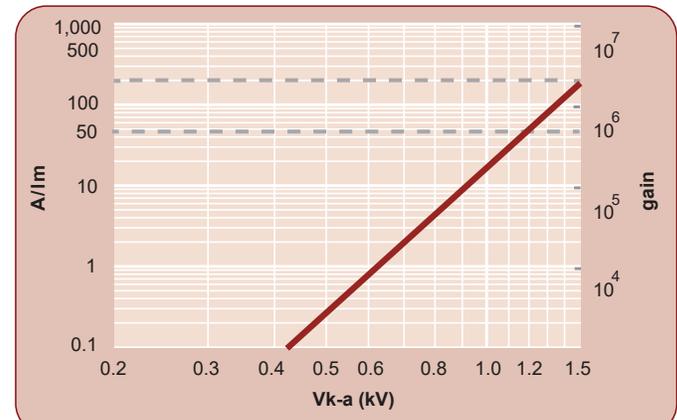


6 characteristics

	unit	min	typ	max
photocathode: bialkali				
active diameter	mm	22	-	
quantum efficiency at peak	%		28	
luminous sensitivity	$\mu\text{A}/\text{lm}$		80	
with CB filter		9	11.5	
with CR filter			2	
dynodes: 8 LF				
anode sensitivity:				
nominal anode sensitivity	A/lm		50	
max. rated anode sensitivity	A/lm		200	
overall V for nominal A/lm	V		1200	
overall V for max. rated A/lm	V		1500	
gain at nominal A/lm	$\times 10^6$		0.6	
dark current at 20°C:				
dc at nominal A/lm	nA		0.5	5
dc at max. rated A/lm	nA		2	
dark count rate	s^{-1}		-	
pulsed linearity(-5% deviation)	mA		10	
pulse height resolution:				
single electron peak to valley	ratio		3.0	
²² Na with 1" x 1" LSO air gap	%		11	
timing: at 1300 V				
multi electron rise time ⁽³⁾	ns		0.8	
single electron jitter (fwhm)	ps		290	
transit time	ns		12	
weight:	g		20	
maximum ratings:				
anode current	μA			100
cathode current	nA			20
gain	$\times 10^6$			2.5
anode sensitivity	A/lm			200
temperature	°C	-30		50
V (k-a) ⁽¹⁾	V			1500
V (k-d1)	V			450
V (d-d) ⁽²⁾	V			200

(1) subject to not exceeding max. rated sensitivity (2) subject to not exceeding max. rated V(k-a)
(3) for L25D19B546 only

7 typical voltage gain characteristics

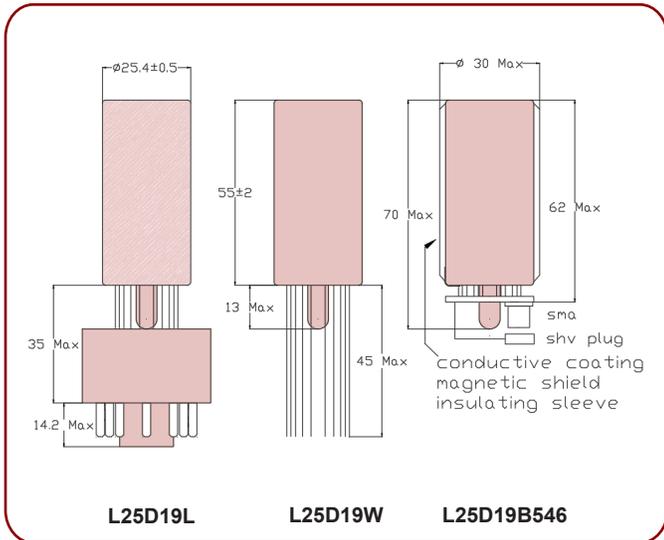


8 voltage divider distribution

k	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	a
4	1.5	1.5	1	1	1	1.5	1	1	Standard

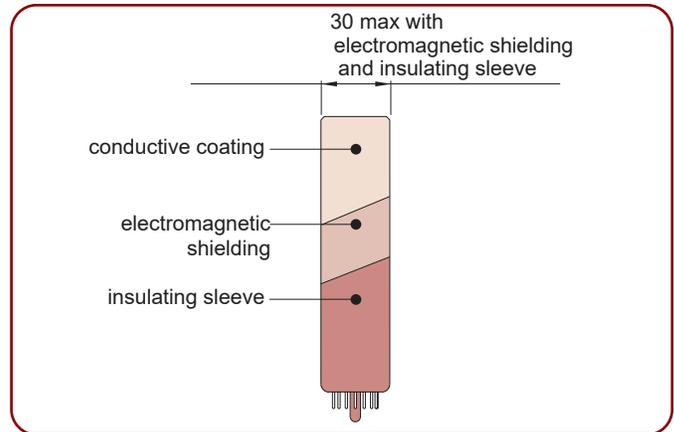
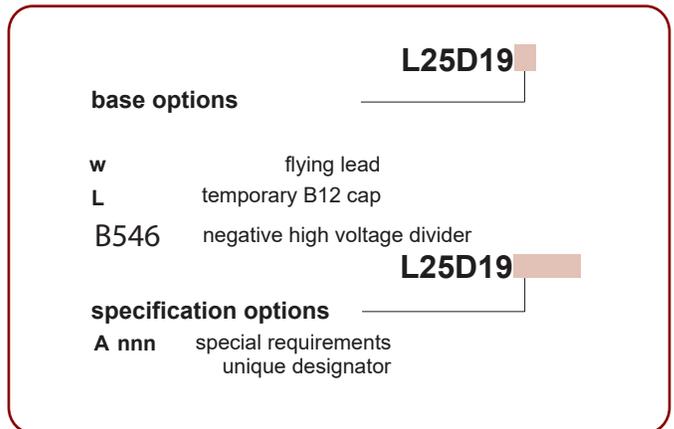
Characteristics contained in this data sheet refer to standard divider for an L25D19L, unless otherwise noted

9 external dimensions mm

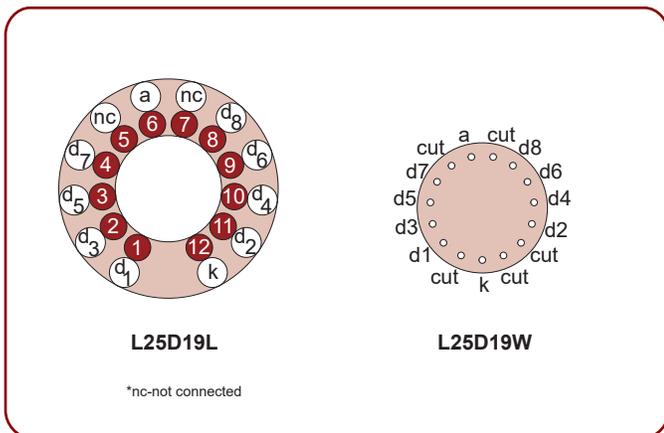


11 ordering information

Product with special test requirements, integral voltage divider network or with one or more of the shielding options below will be assigned a suffix with the letter A followed by a unique 3 digit number to designate the requirement.



10 base configuration (viewed from below)



12 voltage dividers

L25D19B546 is an L25D19W equipped with a negative HV voltage divider with an anode sma connector and an 24 inches long RG174 HV cable with an SHV plug

The L25D19 can be supplied with a custom designed voltage divider installed.

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