

29mm (1.14") photomultiplier L29D40 series data sheet



1 description

The L29D40 is a 29 mm (1.14") diameter, end window photomultiplier with a blue-green sensitive bialkali photocathode and 11 linear focused type dynodes.

2 applications

- wide range of applications
- spectroscopy
- X-ray & gamma spectroscopy
- photon counting of bio- and chemi-luminescent samples

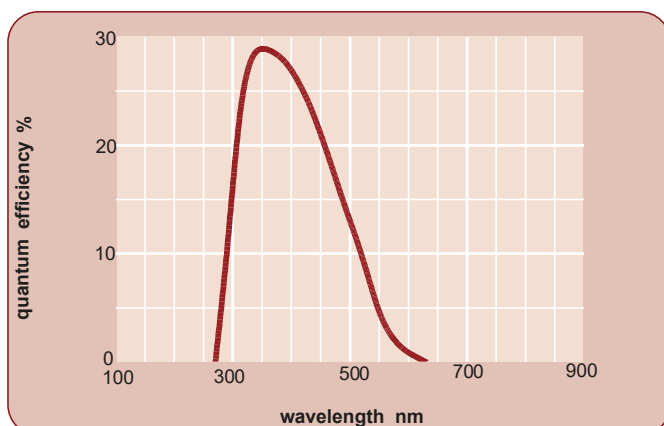
3 features

- high gain
- low profile
- good SER

4 window characteristics

L29D40 hard glass	
spectral range*(nm)	290-630
refractive index (n)	1.49
K (ppm)	
Th (ppb)	(tbd)
U (ppb)	

5 typical spectral response curve

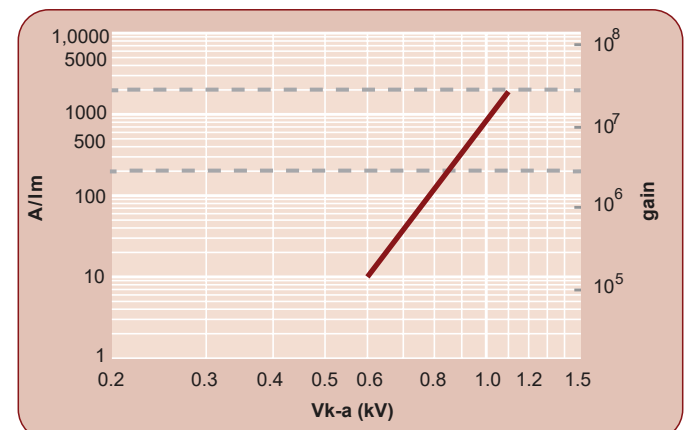


6 characteristics

	unit	min	typ	max
photocathode: bialkali				
active diameter	mm		25	
quantum efficiency at peak	%		28	
luminous sensitivity	$\mu\text{A/lm}$		65	
with CB filter		7	11	
with CR filter			2	
dynodes: 11 LF				
anode sensitivity:				
nominal anode sensitivity	A/lm		200	
max. rated anode sensitivity	A/lm		2000	
overall V for nominal A/lm	V		850	1150
overall V for max. rated A/lm	V		1100	
gain at nominal A/lm	$\times 10^6$		3	
dark current at 20°C:				
dc at nominal A/lm	nA		0.2	5
dc at max. rated A/lm	nA		2	
dark count rate	s^{-1}		100	
pulsed linearity(-5% deviation)	mA		25	
pulse height resolution:				
single electron peak to valley	ratio		2.7	
timing:				
multi electron rise time	ns		4	
single electron jitter (fwhm)	ns		-	
transit time	ns		30	
weight:	g		40	
maximum ratings:				
anode current	μA			100
cathode current	nA			2
gain	$\times 10^6$			30
anode sensitivity	A/lm			2000
temperature	°C	-30		60
V (k-a) ⁽¹⁾	V			1500
V (k-d1)	V			300
V (d-d) ⁽²⁾	V			300

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

7 typical voltage gain characteristics



PRELIMINARY

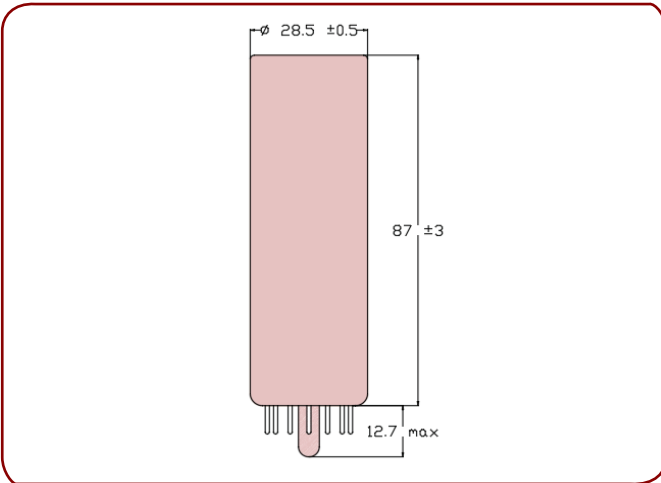
8 voltage divider distribution

k	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	d ₉	d ₁₀	d ₁₁	a
2	1	1	1	1	1	1	1	1	1	1	1	1

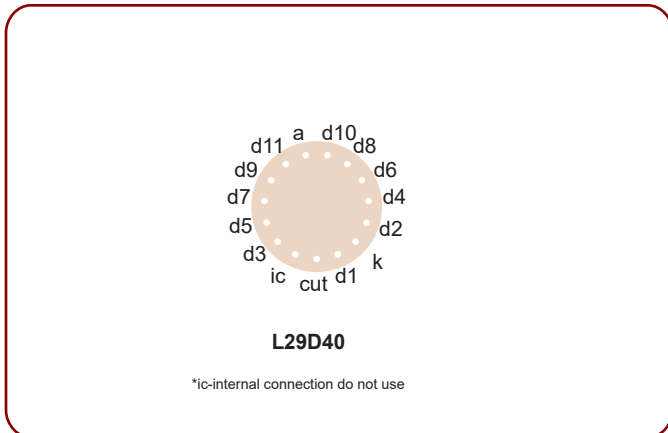
Standard

Characteristics contained in this data sheet refer to standard divider.

9 external dimensions mm



10 base configuration (viewed from below)



The L29D40 can be supplied with a custom designed voltage divider .

11 ordering information

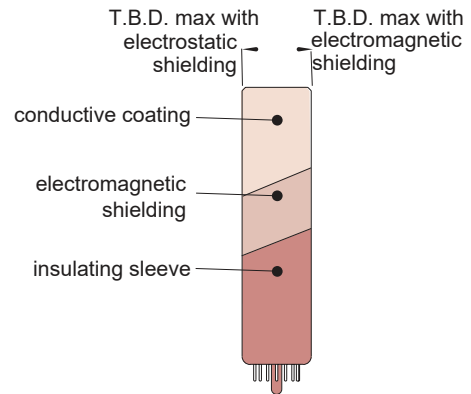
Product with special test requirements, integral voltage divider network or with one or more of the shielding options below will be assigned a suffix with the letter A followed by a unique 3 digit number to designate the requirement.

specification options

L29D40

A nnn special requirements
unique designator

PRELIMINARY



12 Voltage Dividers

Available voltage dividers are :

	k	d ₁	d ₂	d ₇	d ₈	d ₉	d ₁₀	d ₁₁	a
C637A	2R	R	R	R	R	R	R	
C637C	150V	R	R	R	R	R	R	

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