

1-1/8" HEAD-ON PMT MODULE

83120 570 Series

83121 570 Series

BURLE

PRELIMINARY DATA

August 2004

FEATURES:

- 1-1/8" Head-On PMT Module
- Internal HV Power Supply with Low Voltage Input
- Internal Signal Amplifier
- Bialkali and Multialkali Cathodes
- Active Divider for Excellent Signal Accuracy.

APPLICATIONS:

- Fluorescence
- Chemiluminescence
- General Low Light Measurements



The 83120 570 series and 83121 570 series are 1-1/8" Head-On PMT Modules that include an internal HV power supply and internal signal amplifier. The voltage divider is stabilized by an active transistor network. The unit is contained in a rugged aluminum housing which aides in shielding the PMT and eliminates user exposure to high voltage. The 83120 570 Series utilizes a

Bialkali photocathode for peak sensitivity in the blue-green, while the 83121 570 series has a Multialkali photocathode for extended red response. Each module series comes in a variety of amplifier bandwidths (20kHz, 200kHz and 10MHz) to accommodate a number of applications.

GENERAL

Parameter		83120 570 Series	83121 570 Series	Unit
Spectral Response		300 to 660	300 to 850	nm
Wavelength of Maximum Response		390	370	nm
Photocathode	Material	Bialkali	Multialkali	--
Active Area		25		mm
Window	Material	Schott 8250 Glass or equivalent		--
	Shape	Plano-concave		--
Dynode	Structure	In-Line Linearly Focused Cage		--
	# of Stages	10		--
Housing Material		Aluminum with Alodine Coating		--
Supply Voltage Range		+/- 11.5 to +/-15.5		V
High Voltage Output Range		-350 to -1250		V
Physical Dimensions		1-3/8" diameter x 6-7/16"		inch
Weight (typical)		190		grams

MAXIMUM RATINGS

Parameter	Value	Unit
HV Output Voltage	-1250	V
Supply Voltage	+/-16.0	V
Operating Temperature	+5 to +50	°C
Storage Temperature	-20 to +70	°C



PERFORMANCE SPECIFICATIONS (at 25 °C)

<i>Parameter</i>	<i>83120 570 Series</i>	<i>83121 570 Series</i>	<i>Units</i>
HV response time 500 to 1000 1000 to 500		0.5 1.5	sec sec
Cathode sensitivity	120	200	uA/lm
Anode sensitivity	230	100	A/lm
HV output to control input	1000:1		

20 kHz type (570)

<i>Parameter</i>	<i>83120 570</i>	<i>83121 570</i>	<i>Units</i>
Supply current for + 12 for - 12		12.0 1.0	mA mA
Responsivity @ 400 nm	150	30	V/nW
Amplifier gain	1	1	Megohm
Supply interference	0.5	0.5	mV p-p

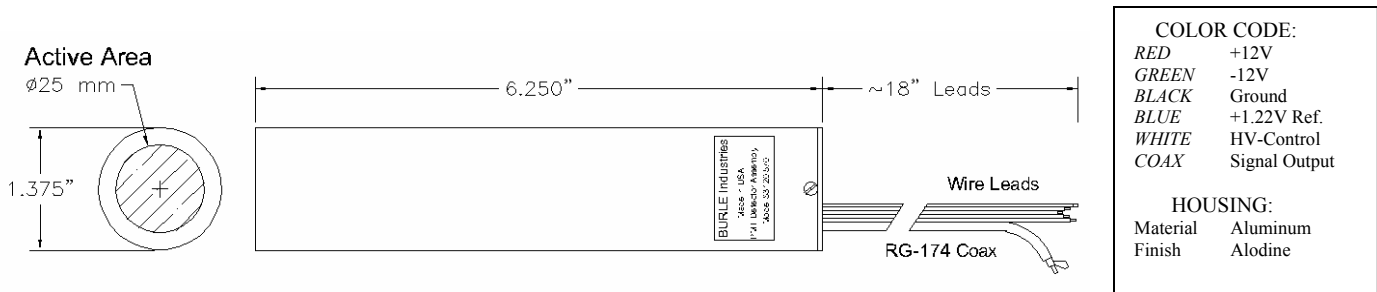
200 kHz type (571)

<i>Parameter</i>	<i>83120 571</i>	<i>83121 571</i>	<i>Units</i>
Supply current for + 12 for - 12		12.0 1.0	mA mA
Responsivity @ 400 nm	30	6	V/nW
Amplifier gain	200	200	Kohm
Supply interference	1.0	1.0	mV p-p

10 MHz type (572)

<i>Parameter</i>	<i>83120 572</i>	<i>83121 572</i>	<i>Units</i>
Supply current for + 12 for - 12		30.0 17.0	mA mA
Responsivity @ 400 nm	15	3	V/nW
Amplifier gain un-terminated	100	100	Kohm
Supply interference	1.0	1.0	mV p-p

83120 and 83121 570 Series Mechanical Drawing:



NOTE: By use of a 10K Potentiometer, the internal reference may be used to set the HV control input voltages.

The information furnished is believed to be accurate and reliable, but is not guaranteed and is subject to change without notice. No liability is assumed by BURLE INDUSTRIES for its use. Performance data represents typical characteristics and not specifications as actual, individual product performance may vary. Customers should verify that they have the most current BURLE product information before placing orders, and should independently test and evaluate BURLE products for their intended use. No claims or warranties are made as to the application of BURLE products or their suitability or fitness for any particular purpose. This document may not be reproduced, in whole or in part, without the prior written consent of BURLE INDUSTRIES.

Copyright 2004 by BURLE Technologies, Inc.. All rights reserved.

BURLE® and BURLE INDUSTRIES® are registered trademarks of BURLE Technologies, Inc.. Marca(s) Registrada(s). Printed in the U.S.A.

FOR ADDITIONAL INFORMATION, TELEPHONE IF IN THE U.S.A. OR CANADA +1-800-366-2875, AND ELSEWHERE, +1-717-295-6888, OR FAX REQUEST TO +1-717-290-1263. BURLE INDUSTRIES, INC., 1000 New Holland Avenue, Lancaster, Pennsylvania 17601-5688 U.S.A.