



LIGO Laboratory / LIGO Scientific Collaboration

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Arm Cavity Baffle Cabling Test Procedure

Mohana Mageswaran

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LIGO Scientific Collaboration

This is an internal working note
of the LIGO Laboratory.

California Institute of Technology
LIGO Project – MS 18-34
1200 E. California Blvd.
Pasadena, CA 91125
Phone (626) 395-2129
Fax (626) 304-9834
E-mail: info@ligo.caltech.edu

Massachusetts Institute of Technology
LIGO Project – NW22-295
185 Albany St
Cambridge, MA 02139
Phone (617) 253-4824
Fax (617) 253-7014
E-mail: info@ligo.mit.edu

LIGO Hanford Observatory
P.O. Box 1970
Richland WA 99352
Phone 509-372-8106
Fax 509-372-8137

LIGO Livingston Observatory
P.O. Box 940
Livingston, LA 70754
Phone 225-686-3100
Fax 225-686-7189

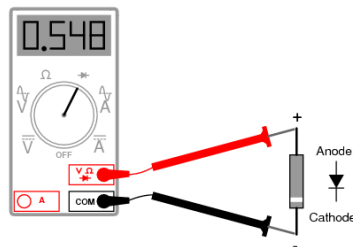
1 Overview

This test procedure applies to ALS Photo detector cabling. These photo detectors will provide a diagnostic tool for monitoring the scattered light from the COC arm cavity mirrors. Test the DB25 electrical cabling of the back side of the baffle. Cabling to the Photo Diodes can be tested for health with a multimeter. Use the diode check range to confirm that the PD has a forward voltage of around 0.5 V.

2 Test Setup

1) Testing a diode with a digital multimeter

- DMM has a setting for testing a diode, usually labeled with the diode symbol.
- Connect the **red** (+) lead to the anode and the **black** (-) to the cathode. The diode should conduct and the meter will display a value (the voltage across the diode)
- Reverse the connections. The diode should NOT conduct.



3 Measurement

ACB Cabling Photo diode Interface internal Connections

		PD forward voltage($\approx 0.5V$)
Cable 1		
DB25-13	Anode (multimeter RED lead)	0.449V
DB25-12	Cathode (multimeter BLK lead)	
Cable 2		
DB25-10	Anode (multimeter RED lead)	0.448V
DB25-9	Cathode (multimeter BLK lead)	

Cable 3		
DB25-7	Anode (multimeter RED lead)	0.451V
DB25-6	Cathode (multimeter BLK lead)	
Cable 4		
DB25-4	Anode (multimeter RED lead)	0.450V
DB25-3	Cathode (multimeter BLK lead)	