



LIGO Laboratory / LIGO Scientific Collaboration

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Arm Cavity Baffle Cabling Test Procedure

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LIGO Scientific Collaboration

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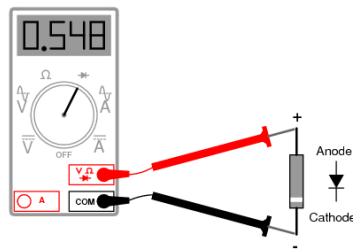
1 Overview

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)	0.405 V
DB25-12	Cathode (multimeter BLK lead)	
Cable 2		
DB25-10	Anode (multimeter RED lead)	0.407 V
DB25-9	Cathode (multimeter BLK lead)	

Cable 3		
DB25-7	Anode (multimeter RED lead)	0.406 V
DB25-6	Cathode (multimeter BLK lead)	
Cable 4		
DB25-4	Anode (multimeter RED lead)	0.406 V
DB25-3	Cathode (multimeter BLK lead)	