

/bugzilla3/

aLIGO Integration Issue and ECR Tracker

Bug 101 - Pinhole transmission in ETM08 and ETM09 ([edit](#))

[Save Changes](#)

Status: CLOSED WONTFIX ([edit](#))

Reported: 2013-05-15 16:21 PDT by [GariLynn Billingsley \(LIGO - Caltech\)](#)

Product: COC

Modified: 2013-05-22 11:51 PDT ([History](#))

Component: aLIGO

CC List: Add me to CC list
1 user ([edit](#))

Version: unspecified

Platform: Optics Other

See Also: **Add Bug URLs:**

Importance: Highest minor

Assigned To: [Peter Fritschel \(LIGO - Massachusetts Institute of Technology\)](#) ([edit](#))

Flags:

URL:

Waiver ()

Depends on:

Blocks:

Show dependency [tree](#)

Orig. Est.	Current Est.	Hours Worked	Hours Left	%Complete	Gain	Deadline
<input type="text" value="0.0"/>	0.0	0.0 + <input type="text" value="0"/>	<input type="text" value="0.0"/>	0	0.0	<input type="text"/> (YYYY-MM-DD)
Summarize time (including time for bugs blocking this bug)						

Attachments

[Add an attachment](#) (proposed patch, testcase, etc.)

Additional Comments:

Status: CLOSED WONTFIX

[Save Changes](#)

[Mark as Duplicate](#)

[GariLynn Billingsley \(LIGO - Caltech\)](#) 2013-05-15 16:21:19 PDT [Description](#) [[reply](#)] [-]

ETM08 H1-x ~200ppm peak transmission at a radius of 38mm
ETM09 L1-y ~900 ppm peak transmission at a radius of 33mm
Probe beam spot size 1mm

Back of the envelope estimate is ~sub ppm loss for the arm cavity.

The diameter of the pinhole on ETM09 is estimated at 10-20 micrometers based on the divergence of the beam coming out the back.

Reports for ETM08
Transmission <https://dcc.ligo.org/LIGO-E1300313-v1>
Scatter <https://dcc.ligo.org/LIGO-E1300311-v1>

Reports for ETM09
Transmission <https://dcc.ligo.org/LIGO-E1300329-v1>
Scatter <https://dcc.ligo.org/LIGO-E1300330-v1>

[Collapse All Comments](#)

[Expand All Comments](#)

[GariLynn Billingsley \(LIGO - Caltech\)](#) 2013-05-22 11:51:35 PDT [Comment 3](#) [[reply](#)] [-]

The following document was updated in the LIGO Document Database:

Title: Discrepancy: Pinhole in HR coating
Document ID: LIGO-E1300474-v1
URL:
<https://dcc.ligo.org/cgi-bin/private/DocDB/ShowDocument?docid=104760>
Date: 2013-05-22 11:45:00
Submitted by: GariLynn Billingsley
Authors: GariLynn Billingsley
Topics: Core Optics, Subsystem Test
Keywords: ETM ETM08 ETM09
Abstract: The following optics are found to have pinholes in the coating, where we see excessive transmission. For the optics examined thus far, this does not cause a problem. Reference aLIGO [bug 101](#):
https://services.ligo-wa.caltech.edu/integrationissues/show_bug.cgi?id=101

[Peter Fritschel \(LIGO - Massachusetts Institute of Technology\)](#) 2013-05- [Comment 2](#) [[reply](#)] [-]
17 09:14:54 PDT

Defects accepted.

[Peter Fritschel \(LIGO - Massachusetts Institute of Technology\)](#) 2013-05- [Comment 1](#) [[reply](#)] [-]
17 09:12:37 PDT

This should become part of the test report data in the DCC for these optics.