



LIGO Laboratory / LIGO Scientific Collaboration

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advanced LIGO

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SHG status Library Documentation

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LIGO Scientific Collaboration

This is an internal working note
of the LIGO Laboratory.

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Library	
Title	SHG
Version	1
TwinCAT version	2.11.2230
Name space	
Author	Sheila Dwyer
Description	Simple library that checks the SHG status by checking for error messages in the IR or green PD or the TEC controller, ensuring that the GR PD is enforcing a low power limit, calculates the conversion efficiency and checks that it is above a minimum. Sets an OK bit if everything is fine.
Error Codes	0x0001 – IR PD error 0x0002 – Green PD limits not set to low 0x0004 – Green PD error 0x0008 – TEC error 0x0010 – IR power Mon too low (less than 0.01 mW) 0x0020 – SHG conversion efficiency too low
Library Dependencies	SaveRestore, Error, Photodetectors, TECController, ReadADC