*LIGO Laboratory / LIGO Scientific Collaboration*

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SHG status Library Documentation

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LIGO Scientific Collaboration

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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 |
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