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Gocator 2100/2300 D-Version FAQs

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What are the main features of the D-version Gocators?

The D-version Gocators offer greatly improved sensitivity, allowing customers to scan darker targets at lower exposure times and higher speeds. They offer over 2x the sensitivity of previous versions while operating as Class 2 (previously Class 2M) and Class 3R lasers. This sensitivity improvement requires the use of firmware 5.0 or higher.

The improvement is so great (see details below) that in most cases the D-version Class 3R lasers will satisfy applications that required a Class 3B with previous hardware, reducing customer integration complexity and cost.

All of the Gocator performance specifications remain the same. However, it is important to note for existing installations that the nominal ocular hazard distance (NOHD) does increase for D-version Gocators. This updated information is in the [Gocator user manual](#), located on lmi3d.com.

Are D-version Gocators compatible with previous hardware (e.g., C-version) and firmware versions?

Yes. As noted above, the sensitivity is greatly improved (with firmware 5.0 or higher), and the NOHD has increased. Two options are available for backwards-compatible sensitivity:

1. **Use your existing 4.x firmware.** You can continue to use your existing 4.x firmware on D-version sensors. The D-version sensors will automatically operate with reduced sensitivity, equal to the previous hardware versions. Note that D-version Gocators do not support 3.x firmware.
2. **Upgrade to 5.x and reduce exposure time.** If you upgrade all Gocators to 5.0 firmware, you may need to reduce the exposure time on the D-version hardware so that it has equivalent performance to your C-version hardware.

Can I buddy D-version with previous versions (e.g., C-version)?

Yes! The only restriction is that the firmware versions must match.

Can I upgrade earlier hardware version Gocators I currently own (e.g., C-version) to D-version?

No. The improved performance requires new hardware. LMI is not offering an upgrade option for existing C-version hardware.

Are C-version Gocators still available for purchase?

Yes. C-version Gocators remain available and fully supported. These can still be ordered for cases where a part-number change is not permitted, or an increase in NOHD is not acceptable.



I have an application written with a 4.x version of your SDK. Do I need to build it using a 5.x version of the SDK to get the D-version improvements?

No. The Gocator must be running 5.0 firmware, but the firmware remains fully backwards compatible with applications written with 4.x SDK.

How does the sensitivity compare between D-version and previous versions?

The following table summarizes the nominal difference in sensitivity between a D-version sensor running 5.0 firmware or higher, and previous version hardware.

Nominal Sensitivity Improvement		
Model	D-version Class 2 vs. Previous Class 2M	D-version Class 3R vs. Previous Class 3R
Gocator 2120, 2320	2.4x	3.1x
Gocator 2130, 2330	3.7x	2.9x
Gocator 2140, 2340	3.2x	5.5x
Gocator 2150, 2350	2.6x	5.7x
Gocator 2170, 2370	N/A	2.8x
Gocator 2180, 2380	N/A	N/A

Why are there no 3B lasers in the D-version?

In many cases the new D-version 3R Gocators offer sufficient performance such that 3B is no longer required. For cases where 3B laser power is still required, the C-version 3B Gocators remain fully supported.

The following table summarizes the nominal sensitivity difference between previous 3B Gocators and the new D-version 3R Gocators:

Model	D-version Class 3R vs. Previous 3B
Gocator 2130, 2330	0.8x
Gocator 2140, 2340	0.9x
Gocator 2150, 2350	0.9x
Gocator 2170, 2370	Same sensitivity
Gocator 2180, 2380	Same sensitivity



Why did Class 2M change to Class 2? What's the difference?

Class 2 is even safer! The design of the Gocator allows for the categorization of the sensors as Class 2, without sacrificing any performance relative to the Class 2M of earlier hardware versions.

For Class 2, in contrast to Class 2M, the use of optical instruments does not increase the risk of eye injury.

Are there any specification changes with D-version sensors?

All datasheet performance specifications (e.g., resolution, linearity) remain unchanged. Due to the changes to the design, the nominal ocular hazard distance (NOHD) values in the Gocator Line Profiler user manual have been updated based on the new design. This change does not affect previous hardware versions.

What is NOHD and what does the change in NOHD mean for my installation?

The improved sensitivity of the D-version sensors means that the nominal ocular hazard distance (NOHD) has increased compared to the previous version of hardware. The NOHD is the distance at which a laser transitions from its stated laser class to an eye-safe laser class (i.e., Class 2 or Class 1).

If your installation depends on the NOHD value, there are a number of options available:

1. Evaluate your installation to determine if the new NOHD values are still acceptable. Updated NOHD values are available in the [Gocator user manual](#).
2. Continue to order and use C-version sensors, which remain available with unchanged NOHD
3. Evaluate using a lower laser class of D-version sensor (e.g., D-version class 2 instead of C-version Class 3R). This will result in a reduced NOHD.

Please contact LMI support (support@lmi3d.com) for any questions or support.

What if I send my sensor back for repair?

It will be returned with the same hardware version, as long as that version remains active (e.g., C-version) or in its service period (e.g., A-version).