



Date: August 14, 2015
Memo to: Damien Josset
From: Wesley Marshall, TSC-7 Chair
Subject: Appendix B, Example 18
Explanation of Classification based on Class 1 instead of Class 2

Question/Comment

This inquiry was received at the LIA office, regarding ANSI Z136.1-2014

"I'm surprised by Appendix B example 18 as it is visible wavelength but class 3R threshold is defined as 5 times class 1 instead of 5 times class 2. Could you clarify what I missed?"

ASC Z136 TSC-7 Response

As an explanation of the Classification based on Class 1 instead of Class 2 for Example 18, ANSI Z136.1 (2014), I offer this:

The Class 2 AEL is based on an aversion response for visible lasers, limiting the exposure duration to more than 0.25 s, where a longer exposure duration is generally used for the Class 1 AEL. However, in this case, the exposure duration is limited by the laser to no more than 1 μ s. Therefore, an aversion response doesn't lessen the hazard and the Class 1 AEL would be equal to the Class 2 AEL. A laser with lower energy could qualify as a Class 1 laser, but at no energy emission level would this single-pulsed laser qualify as a Class 2 laser. The Class 2 AEL is therefore redundant and not used. The Class 3R AEL is five times the Class 1 AEL. Stating that the Class 3R AEL is five times the Class 2 AEL would be misleading since the Class 2 AEL is not higher than the Class 1 AEL and an energy emission level doesn't exist that could qualify this laser as a Class 2 device.



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