



Lusail Real Estate Development Company

Health, Safety, Security, Environment, Logistics & Quality Department

Lusail Construction Safety Procedural Forms/Checklists – Laser Safety Lenses

Document No LUS-HSE-FM4-446-015.02 Rev 2
Uncontrolled Copy Controlled Copy Date 01-Apr-2015

COMPANY PROPRIETARY INFORMATION

Prior to use, ensure this document is the most recent revision by checking the Master Document List. To request a change, submit a Document Change Request to the Document Control Representative. Master copy of this document will be maintained by the LREDC QA/QC Manager. Not controlled if printed.



EYEWEAR SELECTION CHART

Simplified Method for Selecting Laser Eye Protection for Intrabeam Viewing for Wavelengths between 400 and 1400nm									
Q-Switched Lasers (1 ns to 0.1 ms)		Non-Q-Switched Lasers (0.4 ms to 10 ms)		Continuous Lasers Momentary (0.25 s to 10 s)		Continuous Lasers Long-Term Staring Greater than 3 hours		Attenuation	
Maximum Output Energy (J)	Maximum Beam Radiant Exposure (J·cm ⁻²)	Maximum Laser Output Energy (J)	Maximum Beam Radiant Exposure (J·cm ⁻²)	Maximum Power Output (W)	Maximum Beam Irradiance (W·cm ⁻²)	Maximum Power Output (W)	Maximum Beam Irradiance (W·cm ⁻²)	Attenuation Factor	OD
10	20	100	200	NR	NR	NR	NR	100,000,000	8
1.0	2	10	20	NR	NR	NR	NR	10,000,000	7
10 ⁻¹	2 x 10 ⁻¹	1.0	2	NR	NR	1.0	2	1,000,000	6
10 ⁻²	2 x 10 ⁻²	10 ⁻¹	2 x 10 ⁻¹	NR	NR	10 ⁻¹	2 x 10 ⁻¹	100,000	5
10 ⁻³	2 x 10 ⁻³	10 ⁻²	2 x 10 ⁻²	10	20	10 ⁻²	2 x 10 ⁻²	10,000	4
10 ⁻⁴	2 x 10 ⁻⁴	10 ⁻³	2 x 10 ⁻³	1.0	2	10 ⁻³	2 x 10 ⁻³	1,000	3
10 ⁻⁵	2 x 10 ⁻⁵	10 ⁻⁴	2 x 10 ⁻⁴	10 ⁻¹	2 x 10 ⁻¹	10 ⁻⁴	2 x 10 ⁻⁴	100	2
10 ⁻⁶	2 x 10 ⁻⁶	10 ⁻⁵	2 x 10 ⁻⁵	10 ⁻²	2 x 10 ⁻²	10 ⁻⁵	2 x 10 ⁻⁵	10	1
NR = Not Recommended									

Reprinted with permission of the [Laser Institute of America](#) (1983)