

ML7710-PDT

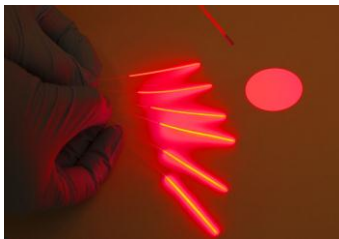
Turnkey laser system for photodynamic therapy (PDT)

Overview

ML7710-PDT is a turnkey laser system platform tailored for photodynamic therapy (PDT) application. It is equipped with all required functionalities for safety and usability. The standard features include easy-to-use touch screen user interface, multiple individually addressable fiber output channels, aiming beam, smart internal calibration module, foot/hand switch, fiber sensors and safety interlocks. Optional services include: customized treatment flow, individual industrial design, annual calibration and field service, and extended warranty. The design and manufacturing processes are done according to **ISO 13485:2003** and the design complies with **EN60601** requirements.



Features



Up to 7 individually controllable laser channels.



Automatic calibration of all the delivery fibers at one time.



Easy dose calibration with a simple and intuitive touch-screen UI.

Electro-optical Characteristics, Typical Values

Parameter	Symbol						Unit
Wavelength ¹	λ	630	635	652	665...689	753	nm
Optical Output, channel A	P_{OPT}	2	3	5	5	8	W
Optical Output, channels 1-6	P_{OPT}	200	300	500	500	800	mW
Power Stability (24 hrs)	δP	< 5	< 5	< 5	< 5	< 5	%
Fiber Core Diameter	\varnothing_{CORE}	400 ²	400 ²	400 ²	400 ²	400 ²	μm
Fiber Numer. Aperture	NA	0.22	0.22	0.22	0.22	0.22	-

All the above values are typical for CW operation @ 15-30°C

¹ Wavelength specification 90% of the output power within +/- 3nm.

² Fiber core diameters 200...800 μm available per request.

Ordering information

Please specify the desired wavelength when ordering: ML7710-PDT-xxx (replacing xxx with **630**, **635**, **652**, **665**, **675**, **683**, **690** or **750**). Modulight sales team sales@modulight.com will be happy to help you out.

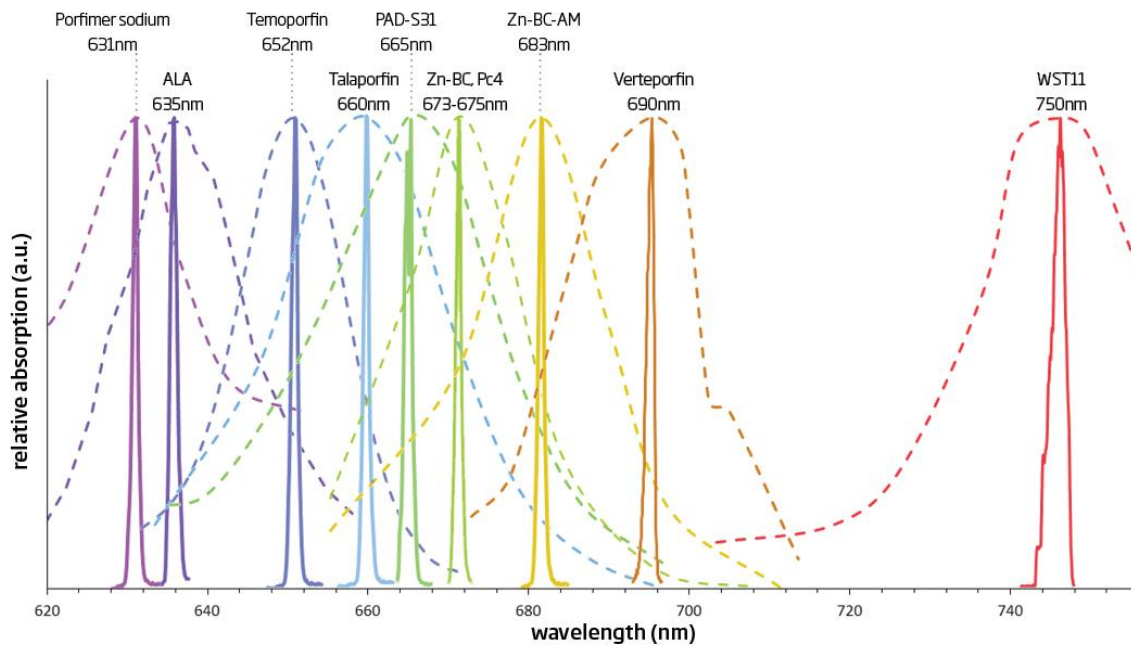
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Relative Humidity	RH	95	%
Input Voltage	V_{IN}	88...132 / 176...264	VAC
Ambient Temperature	T_{AMB}	30 ¹	°C
Storage Temperature	T_{STG}	-20...50	°C

¹ A non-condensing environment must be ensured during operation.

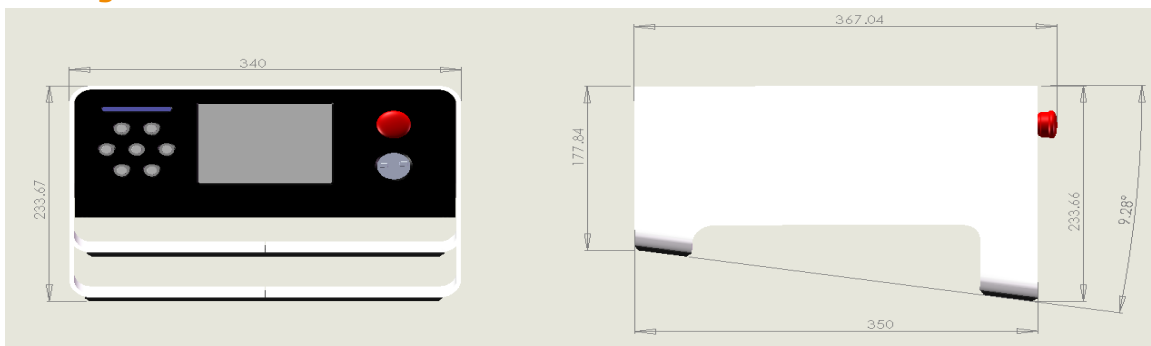
² System must be allowed to set to normal operating conditions after storage before operation.

Photosensitizers and laser wavelengths



The absorption spectra of some common photosensitizers and the laser emission spectra of Modulight ML7710-PDT.

Package Information



The package is a custom designed and manufactured case with aluminum frame and stainless steel front and back panels.

Safety Information

The laser light emitted from this laser device may be visible or invisible, depending on the laser selected. The laser light is harmful to the human eye. Avoid eye and skin exposure to the beam, both direct and reflected. Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please ensure ESD protection prior to handling the products. The devices have built-in software and hardware based safety features required for medical purposes.



Peak power and wavelength are for safety analysis only, not to present device performance.

Liability note

This document is sole property of Modulight, Inc. No part of this document may be copied without written acceptance of Modulight, Inc. All statements related to the products herein are believed to be reliable and accurate. However, the accuracy is not guaranteed and no responsibility is assumed for any inaccuracies or omissions. Modulight, Inc. reserves the right to make changes in the specifications at any time without prior notice.

PRELIMINARY

version: 1 · page 2