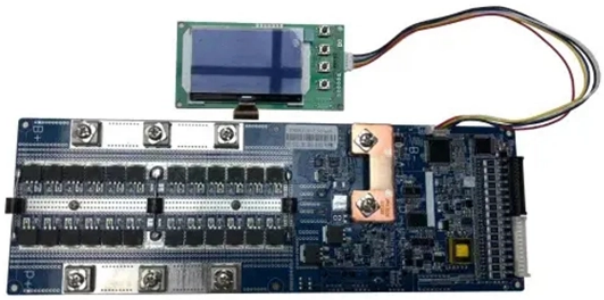
Light Absorber Module



Overview

High-power light absorbers (HPLAs) used in high-power lasers are designed to absorb and manage light efficiently, minimizing back-scattered light and stray light while handling high optical power. NLR's materials discovery and design researchers work to discover new light-absorbing semiconductors and develop existing absorbers to enable technologies such as thin-film photovoltaic (PV) devices and photoelectrochemical (PEC) cells. The panels can be integrated using compatible optical mount or using panels with low outgassing adhesive back (optional). Hexa Black™ light absorbing. The U. Department of Energy (DOE) Solar Energy Technologies Office (SETO) supports innovative research focused on overcoming the current technological and commercial barriers for cadmium telluride (CdTe) solar modules. When properly implemented, it increases the optical path of light rays in the photoabsorbtive material without increasing the layer thickness thus promoting a more complete absorption and. The objective of this study is to create a planar solar light absorber that exhibits exceptional absorption characteristics spanning from visible light to infrared across an ultra-wide spectral range. The eight layered structures of the absorber, from top to bottom, consisted of Al 2 O 3, Ti, Al 2.

Light Absorber Module

	This work provides a straightforward and scalable approach to manufacturing high-performance light absorbers for efficient solar energy harvesting and utilization.
	CdTe is a material made from the combination of two elements: Cadmium (Cd) and Tellurium (Te). It plays a critical role of light absorption—hence why a CdTe solar cell is named after it. However, a cell ...
	Our PEC photoactive materials research focuses on using established semiconductor processing techniques to improve structural quality and increase performance of emerging light absorber ...
	The study of ideal absorbers, which can efficiently absorb light over a broad range of wavelengths, is of fundamental importance, as well as critical for many applications from solar steam generation and ...
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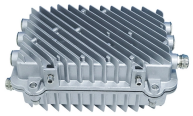
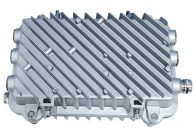
Acktar Light Absorbing Panels are used in optical systems as light absorbing black out material, stray light absorber or low power laser beam dumps. The panels can be integrated using compatible ...

Light trapping is employed in virtually every solar module in order to enhance light capture and absorption by the cells. The effect of light trapping varies based on the type of photovoltaic materials ...



LSCs are optoelectronic devices based on a sun irradiation collector made of fluorophores that, after the solar radiation absorption, re-emit visible light propagating via a waveguide towards ...



The cover glass sheet at the front of PV modules provides mechanical and chemical protection of the light absorber in the module, as well as high optical transmission.

	Acktar Light Absorbing Panels are used in optical systems as light ...

Contact Us

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