



THIN FILM LIGHT DEPENDENT RESISTOR (TFLDR)

Centre for Nanomaterials

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Overview

Visible light or wide range photonic light switching is very important for automation and energy conservation. Specially, in context to Indian street light systems, huge amount of energy (electricity) goes waste due to manual switching operations.

ARCI has developed Thin Film LDR (TFLDR) to attend this problem by utilizing economic materials and deposition technology. This hybrid chemical based methodology has a potential of scalability. Nanostructured film has capability to yield high sensitivity and tuning of spectral range from ultraviolet (UV) to infrared (IR).

Key Features

- Visible light spectrum (Max. sensitivity λ at 500nm)
- Transparent & back - illumination planar configuration
- High Sensitivity (10^3) & quick response (1-2 msec)
- Adherent, sturdy nanostructured sensor

Applications

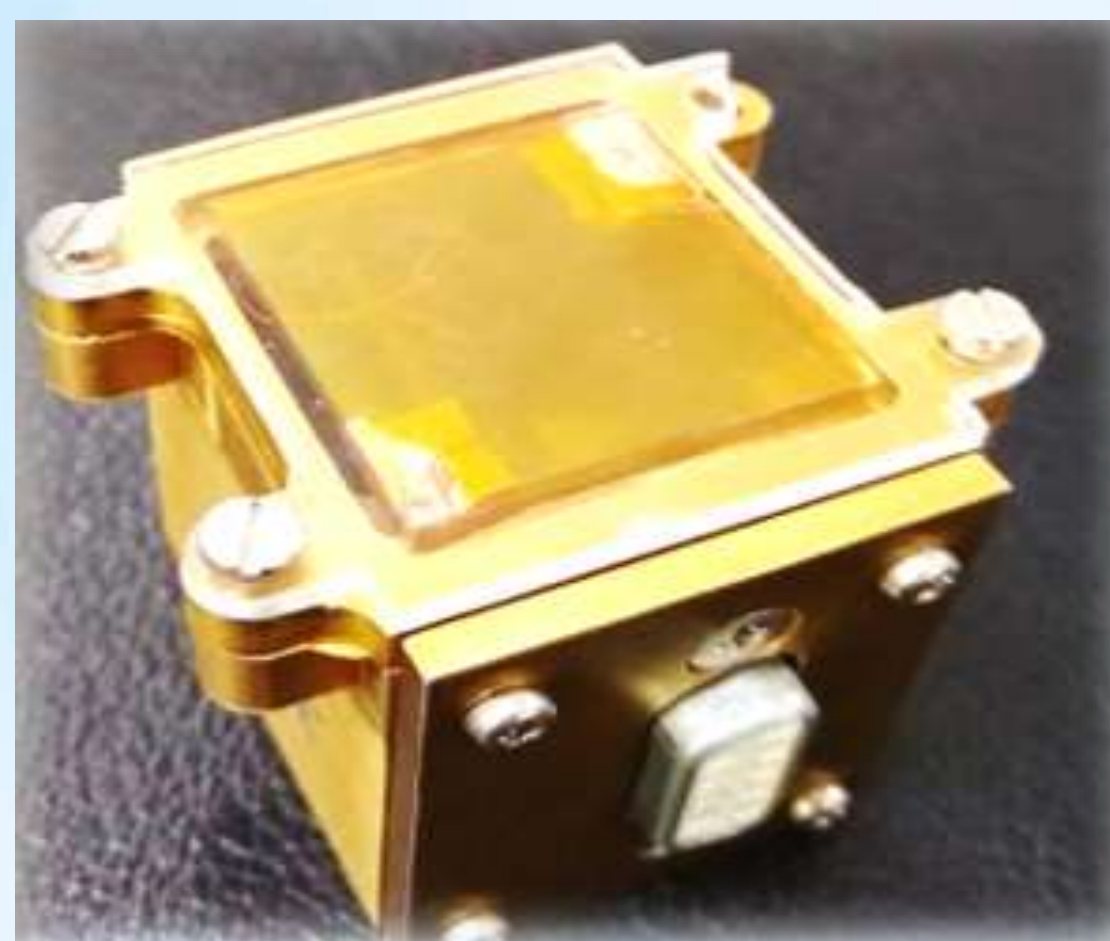
- Automatic light switching ON/OFF
- Photoelectric control
- Auto flash for camera
- Electronic toys
- Industrial control



Solar Light Switching



Thin Film LDR (TFLDR)



Metallic Module with TFLDR



Plastic Module with TFLDR

Technology Status

- Successfully transferred the technology to Magni5 Technology Solutions Pvt. Ltd.

*Intellectual Property Development Indices

IPDI	1	2	3	4	5	6	7	8	9	10
Activities	Basic concepts and understanding of underlying scientific principles	Shortlisting possible applications	Research to prove technical feasibility for targeted application	Coupon level testing in stimulated conditions	Check repeatability/ consistency at coupon level	Prototype testing in real-life conditions	Check repeatability/ consistency at prototype level	Reassessing feasibility (IP, competition technology, commercial)	Initiate technology transfer	Support in stabilizing production
Status										