DLP® – Spatial Light Modulators with High Resolution and High Speed

DLP® micro mirror arrays are the core element of more than 20 Million projector devices and TVs and they are famous for the current Pico™ Projectors embedded in mobile phones. DDP projector chipsets are implemented in all such projection systems; they are carefully optimized to generate high-quality colour pictures for the human eye.

There is enormous potential of the DLP® chip **beyond projection** or conventional projection. Texas Instruments supports new developments by the general purpose **DLP® Discovery™ chipset.** In distinction to the DDP projector chipset, DLP® Discovery™ is a hardware level that gives significantly better control over the micro mirror array. Introduced with the first version in 2001, DLP® Discovery™ has become a unique platform for many successful product developments since then. The high switching speed combines with the digital precision and proven reliability of the DLP® chip. Outstanding products are the result.

DLP® Discovery™4100: excellent customer response

The current platform Discovery™4100 is selling since 4 months and ViALUX received very positive feedback from customers who carried out a proof of concept for their new product concept or have already launched the product development. The different Starter Kit models fit very well to the various requirements. Also the long term compatibility of the .7 XGA format is acknowledged by customers who are in production since 2001. The wide spectral range covers the near UV as well as the near IR which is unique for SLMs.

DLP® Chip	mirror array	mirror pitch
0.55” XGA 2x LVDS DMD VIS	1024 x 768	10.8 µm
0.7” XGA 2x LVDS DMD VIS	1024 x 768	13.7 µm
0.7” XGA 2x LVDS DMD NIR	1024 x 768	13.7 µm
0.7” XGA 2x LVDS DMD UV	1024 x 768	13.7 µm
0.95” 1080p 2x LVDS DMD VIS	1920 x 1080	10.8 µm
0.95” 1080p 2x LVDS DMD UV	1920 x 1080	10.8 µm

ALP-4.1 Controller Suite: increased performance

ViALUX has also released the new **ALP-4.1 Controller Suite for Discovery™4100.** ALP-4.1 drives the new chipset to the full extent of the 2x LVDS Discovery™4100 data rate and provides outstanding

22 727 fps

i.e. 22 727 full global array switches per second for the 0.55 and 0.7 XGA DMD – instantly available by just loading and calling a sequence of patterns using the ALP API. This latest member of the ALP family of DLP® Discovery™ Controllers provides even more performance while maintaining compatibility to all previous ALP models.

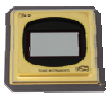
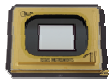
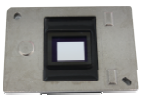
The new **ALP-4.1** ***high-speed*** controller offers:

- support of the Microsoft® VISTA/WIN7 **64bit** operating systems in addition to XP/VISTA 32bit
- increase of the on-board memory capacity to **32Gbit**
- lossless **on-the-flight compression** for significantly increased USB transfer rates, up to **2Gbit/s** have been measured for typical patterns

LED-OM: Optical modules for all Discovery™4100 formats

ViALUX has added new models to the existing line of LED-OM products:

- A new optical module is available now for the High Definition **0.95 1080p DMD** in addition to the popular 0.7 XGA and 0.55 XGA optics
- A new **ALP controlled LED driver** is released supporting the high power LED light sources
- Very high power LED light sources with **10W optical output** have been implemented into LED-OM

DMD format	**0.95" 1080p** A-Type	**0.7" XGA** A-Type			**0.55" XGA** X-Type	
DMD packaging						
Image width	>435 mm	>500 mm	60 mm	10 mm	>500 mm	60 mm
Working distance	>300 mm	>1000 mm	80 mm	25 mm	>1000 mm	80 mm
Projection offset	0%	125%	125%	0%	129%	129%
Throw ratio	0.7	1.8–2.1	1.3	–	1.94–2.27	1.3
Dimensions [mm]	170x190x200	75x115x44	105x115x44	135x115x44	75x115x44	105x115x44
Weight	1800 g	300 g	330 g	400 g	300 g	330 g
	LED-OM models without ALP interface					
LED 245 lm@629 nm		07-R	07-R-S		55-R	55-R-S
LED 230 lm@527 nm		07-G	07-G-S		55-G	55-G-S
LED 55 lm@460 nm		07-B	07-B-S		55-B	55-B-S
LED 225 lm white		07-W	07-W-S		55-W	55-W-S
	LED-OM models with ALP interface					
LED 10W@390 nm				HP-07-390-XS		
LED 1010 lm@624 nm	HP-95-R	HP-07-R	HP-07-R-S			
LED 2450 lm@528 nm	HP-95-G	HP-07-G	HP-07-G-S			
LED 435 lm@464 nm	HP-95-B	HP-07-B	HP-07-B-S			
without light source	NoL-95	NoL-07	NoL-07-S		NoL-55	NoL-55-S

Visit us

SPIE Photonics West

http://spie.org/photonics-west.xml

San Francisco
27th – 28th January

We will have the latest Discovery™4100 Starter Kits and ALP-4.1 Controller Suites on display and we look forward to discussing your requirements for new emerging products.

ViALUX

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