

# SM2815 Scanning System

## Summary

**SM2815** is the fastest close-loop scanner made in China for laser display so far. The galvo of SM2815 uses a double length magnetic rotator compared with that of SM2800. Therefore, SM2815 is more powerful than SM2800.



Our test result shows that SM2800 can be tuned up to 60Kpps @  $\pm 12^\circ$  optical scan angle on ILDA 30K test pattern with mirror size of 0.7mm x 6mm x 11mm. It can even go up to 80Kpps @  $\pm 5^\circ$  after optimizing the parameters of AMP (Scan V4.3A).

## Technical Information

- **Max Scan angle:**  $\pm 30^\circ$  optical (factory calibration @  $\pm 20^\circ$  )
- **Mirror Size:** 6mm\*11mm\*0.7mm, (5mm\*10mm\*0.7mm for higher speed)
- **Mirror coating:** High quality dielectric film,
- **Reflectivity:** >98% @  $45^\circ$  incidence (400nm-700nm)
- **Dimension of Galvo:** 12.7mm (diameter for fixture ) x ??mm (length without mirror)
- **Power requirements:**  $\pm 24$ VDC @ 1.2A each
- **Input Voltage:**  $\pm 5$ VDC differential
- **Dimensions of Amp:** 81.6mm\*62.5mm\*33mm
- **Protection Circuitry:** Input clamping and power limiter circuit built in Amp.

## Scan Speed

Scan angle	Operating voltage	Speed @ Mirror size	Speed @ Mirror size	Test Pattern
$\pm 30^\circ$ Opt	$\pm 24$ VDC	31Kpps @ 6*11*0.7	33Kpps @ 5*10*0.7	ILDA 30K
$\pm 20^\circ$ Opt	$\pm 24$ VDC	40Kpps @ 6*11*0.7	43Kpps @ 5*10*0.7	ILDA 30K
$\pm 15^\circ$ Opt	$\pm 24$ VDC	51Kpps @ 6*11*0.7	53Kpps @ 5*10*0.7	ILDA 30K
$\pm 12^\circ$ Opt	$\pm 24$ VDC	60Kpps @ 6*11*0.7	64Kpps @ 5*10*0.7	ILDA 30K
* $\pm 5^\circ$ Opt	$\pm 24$ VDC	80Kpps @ 6*11*0.7	82Kpps @ 5*10*0.7	ILDA 30K

\*Note: R26=2M , R28=430K for  $\pm 5^\circ$  Opt ILDA test

## Contents of Shipping Package

- (1) 2 x 2815 Scanner (Galvo) with mirror
- (2) 2 x Scan V4.3A servo driver (Amp)
- (3) 1 x (X-Y) scanner mount
- (4) 1 x  $\pm 24$  VDC switched power supply
- (5) 2 x Shield cable for scanner

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