



Creating Tomorrow's Memories

2.5" SATA3 SLC MLC & pSLC SSD  
With AES-256 bit Hardware Encryption  
Automotive 105°C operating temperature

7/9.5 mm

Photon series  
AS25-SATA3

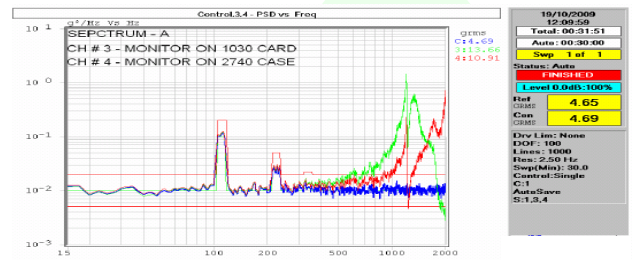
## Product Overview

The *Photon series* presents SATA3 interfaces in a standard 2.5" Form Factor SLC, pSLC and MLC Flash Drive. Asine AS25 flash drive delivers performance and proven reliability for data and mission critical systems. Added benefits of flexibility are built into Asine's AS25 storage systems, including easy field firmware upgrades and expandable storage capacity as flash disk capacities increase. The AS25 drives support **SPOR** (Sudden Power Off Recovery) / **PLP** (Power Lost Protection), OEM application specific features such as **AES-256 bit hardware encryption**, **OPAL**, **fast sanitize erase**, **high grade Industrial certified metal & workmanship**, optional conduction cooling (no air flow required), BOM configuration awareness and more. Product is compliant to JGPSSI-JIG, REACH, and RoHS.

### Sustained performance test:



### Vibration test:



## Applications

- Defense, Aerospace
- Industrial & Commercial PC/Tablet Systems
- ATM, Gaming, Lottery
- Automotive, Navigation, Infotainment
- ECU, Safe Driving, Anti hacking
- Point Of Sale- POS / Kiosk, Smart Terminals
- Medical
- Industrial Avionics & Airborne Systems
- Rugged Computer
- High-Speed Data Recording
- Security, HLS-Home Land Security
- Video Surveillance, JPEG2000 Capture
- Factory Automation
- JBOD, NAS, SAN, RAID



## Features

- Highest quality SLC, pSLC & MLC Flash technology
- 30GB to 1000GB of non-volatile (per model) Flash memory in a 2.5" form factor
- SATA1, SATA2 & SATA3 interfaces
- Optional - AES-256 Hardware Encryption, OPAL and SPOR / PLP (certain models)
- All modes to PIO4 & UDMA6 of SATA interface, ATA8 standard compliance
- **Fast sanitize erase** for entire media (few seconds typical) capacity dependent
- Operating temperature – Commercial 0°C to 70°C, Industrial -40°C to +85°C, and optional: Extreme from -50°C to 110°C
- Storage temperature -60°C to +110°C
- Humidity 5% to 95% relative, non-condensing
- Altitude (operating & non-operating) 0 to 70,000 feet
- High data transfer rate: Up to 550 MB/Sec Sustained Read and up to 500 MB/Sec Sustained Write (capacity, technology & file system dependent)
- IOPS 4KB random Read: pSLC/MLC: 45K, Write: 50K  
Sustained Read: 24,000, Write: 80,000 (overall capacity dependent)
- Reliability - MTBF - 1,500,000 hours MIL-HDBK271F
  - Embedded EDC/ECC, support up to 64-bit BCH Algorithm for Error Correction Bad Block Mapping and Management
  - Built-in power-up self test and automatic self-diagnostics
  - Wear-Leveling Algorithm: Dynamic & Static
  - Safety - Non flammability approved - IEC60950-1(ed.2), IEC60950-1(ed.2); am1 and IEC60950-1 (ed.2); am2
- Power: Max. 2.7 W @ 500GB for all temperatures up to +90°C (capacity dependent). 0.8 W on Idle. 7W @ +110°C
- TBW - Up to 2PB SLC overall Write/Erase cycles with 512GB of SLC technology SSD; 120 for 500GB MLC; 4800 for 240GB pSLC; Read unlimited
- Heat dissipation balancing for demanding applications
- SSD unit sustain environmental
  - Shock - Half Sine, 40G peak, 11ms; Half Sine, 1500G (3 axes)
  - Vibration - 16.3G RMS (Random, 20Hz to 2000 Hz, 3 vibrations axes)

The AS25-SATA3 is a top reliable high-performance mass storage Solid-State Disk with no moving parts, ideal to meet the reliability requirements for high quality storage, data store, video and audio servers, as well as broadcasting systems and general computing. The AS25 drives are designed to withstand long life true full capacity, while operating without compromising data integrity.



### Dimensions:

100.2 L X 70 W X 7 mm H  
100.2 L X 70 W X 9.5 mm H for Z1, Z3, P temperature suffix

### Weight:

70 gr. typ. (110 gr. for Z1, Z3, P)

Ordering Information: P/N Structure: AS25-[SATA3]-[cap]-[t][c][f][h][m][xnn]

P/N Prefix	SATA3 I/F	Capacity	t	c	f	h (Sanitize Erase)	m
AS25-SATA3	SATA3 I/F	0030 2)30 GB	C 0°C to +70°C	D Conduction & Convection Cool	F Conformal Coating	W 1)2)3) S/W	SP pSLC Flash
		0060 2)60 GB	Z -40°C to +85°C			H 1)2)3) H/W	M MLC Flash
		0120 1)2)120 GB	Z1 -40°C to +100°C				
		0240 1)2) 240 GB	Z4 -50°C to +105°C*				
		0500 1)2)500 GB	P -60°C to +110°C*				
		1000 1)2)1000 GB					
			*Tc Case temperature				
			Optional extreme temperature for OEM				
			Net capacity could be depended by system				
			1) MLC 2) pSLC				
						X	
						X00 Fast Erase (or X0)	
						X20 OPAL & Fast Erase	
						X21 OPAL & MIL Fast Erase	

Additional Options:  
• Customization available

Consult factory for SLC capacities

### Ordering Example:

AS25-SATA3-1000-ZSP is a 2.5" SSD with 1000GB pSLC Flash, SATA3, operating at -40°C to +85°C

The information contained in this document is subject to change without notice