


## Digifast Ace Series M.2 NVMe SSD



### Model

Brand	• Digifast
Series	• Digifast Ace
Model	• Digifast Ace 256GB M.2 SSD
Device Type	• Internal Solid-State Drive(SSD)
User Type	• Consumer
IC Type	• Phison PS5012-E12

Photos	Models	Capacity
	DGFA256M2L01	256GB
	DGFA512M2L02	512GB
	DGFA1TM2L03	1TB
	DGFA2TM2L04	2TB

## Product Specifications

Specifications	Descriptions		
NAND Type	Toshiba BiCS3 TLC NAND flash		
Power Consumption	▪ L1.2 < 2 mW		
Maximum temperature	<ul style="list-style-type: none"> <li>• Storing: 85°C (Humidity 0%RH)</li> <li>• Operating: 70°C (Humidity 0% RH)</li> </ul>		
Minimum temperature	<ul style="list-style-type: none"> <li>• Storing: -40°C (Humidity 0% RH)</li> <li>• Operating 0°C (Humidity 0% RH)</li> </ul>		
Maximum Humidity	<ul style="list-style-type: none"> <li>• Storing: 40°C (90%RH)</li> <li>• Operating 40°C (93%RH)</li> </ul>		
Temperature Cycling	<ul style="list-style-type: none"> <li>• Storing -40°C /85°C</li> <li>• Operating 0°C /70°C</li> </ul>		
Reliability	<ul style="list-style-type: none"> <li>▪ Mean Time Between Failure (MTBF) 1.8 million hours</li> <li>▪ Uncorrectable Bit Error Rate (UBER) &lt; 1 sector per 10<sup>16</sup> bits read</li> </ul>		
Dimension (mm)	80 (L) x 22 (W) x 3 (H)		
Weight	0.64 Ounce		
Shock	Non-operational	Acceleration Force: 1500G	
Vibration		Frequency/Displacement	Frequency/Acceleration
	Non-operational	20Hz~80Hz/1.52mm	80Hz~2000Hz/20G
Drop		Height of Drop	Number of Drop
	Non-operational	80cm free fall	6 face of each unit
Bending		Force	Action
	Non-operational	≥ 20N	Hold 1min/5times

Parameter	Rating
Operating Voltage	Min=3.14V Max=3.47V
Rise Time (Max/Min)	100 ms / 0.1 ms
Fall Time (Max/Min)	5 s / 1 ms
Min. Off Time	1 s

# Electrostatic Discharge (ESD)

Specification	+/- 4KV
EN 55024, CISPR 24 EN 61000-4-2 and IEC 61000-4-2	Device functions are affected, but EUT will be back to its normal or operational state automatically.

# Terabytes Written (TBW)

Capacity	Flash Configuration	Flash Type	TBW
256GB	128GB x2	BGA272, BiCS3 TLC, 256Gb QDP	380
512GB	256GB x2	BGA272, BiCS3 TLC, 256Gb ODP	800
1024GB	256GB x4	BGA132, BiCS3 TLC, 256Gb ODP	1,665
2048GB	512GB x4	BGA152, BiCS3 TLC, 512Gb ODP	3,115

Advance Flash Management		
Advance Wear Leveling	TRIM	Bad Block Management
SMART	Over-Provision	Firmware Update

## Performance

Capacity	CrystalDiskMark		IOMeter		Flash Configuration
	Read (MB/s)	Write (MB/s)	Read (KIOPS)	Write (KIOPS)	
E12 240 256GB	3080	1045	168k	237k	64GB x 4 8CE 256Gb DDP
E12 480 512GB	3400	2020	357k	445k	128GB x 4 16CE 256Gb ODP
E12 960 1024GB	3470	3000	600k	600k	256GB x 4 32CE 256Gb ODP
E12 1920 2048GB	3470	2750	500k	513k	512GB x 4 32CE 512Gb ODP

## Power Consumption

Capacity	Flash Configuration	Power Consumption			
		Read (W)	Write (W)	PS3 (mW)	PS4 (mW)
E12 240 256GB	64GB x4 8CE 256Gb DDP	5.1	3.9	16	2
E12 480 512GB	128GBx4 16CE 256Gb QDP	5.5	4.1	16	2
E12 960 1024GB	256GBx4 32CE 256Gb ODP	6.6	5.3	16	2
E12 1920 2048GB	512GBx4 32CE 512Gb ODP	5.7	5.4	16	2



**NOTES:**

1. Performance is measured based on the following conditions:
  - A. CrystalDiskMark 5.1.2, 1GB range, QD=32, Thread=1
  - B. IOMeter, 1GB range, 4K data size, QD=32 (3) ATTO, transfer Size 8192 KB
2. Power consumption is measured during the sequential read and write operations performed by CrystalDiskMark with the conditions described in 1(A).

## More Information

For additional details on the Digifast® products, please visit: [www.digifast-usa.com](http://www.digifast-usa.com)

Specifications are subject to change without notice.