

The Most **Reliable**  
Storage For Industries

**PV230-M280**  
**(M Key)**



## Overview

### PV230-M280 (M Key)

Apacer PV230-M280 is a high-performance SSD designed with M.2 2280 mechanical dimensions, offering full compliance with the PCIe Gen3 x4 interface and NVMe 1.4 specifications. It supports power management modes, significantly reducing power consumption. Built with a powerful PCIe controller that features on-the-module ECC and an efficient wear leveling scheme, PV230-M280 delivers outstanding data transfer performance. Its compact design and high-speed storage make it an ideal choice for larger, faster hosts deployed in varied applications requiring exceptional performance.



Utilizing 3D NAND technology for capacities up to 2TB and offering greater power efficiency than 2D NAND, PV230-M280 is equipped with an LDPC (Low-Density Parity Check) ECC engine to enhance endurance and improve data reliability. It also features a built-in thermal sensor to monitor SSD temperature via S.M.A.R.T commands and incorporates thermal throttling to dynamically adjust frequency scaling, ensuring data reliability and sustained performance under overheating conditions. To further mitigate heat-related damage, PV230-M280 integrates a heat spreader that efficiently transfers heat while maintaining high-speed performance. Additionally, to ensure stable operation in high-vibration and extreme environmental conditions, PV230-M280 incorporates Sidfill technology to enhance product reliability and resistance to various thermal and mechanical shocks. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points along the data transfer path, providing reliable data delivery.

In terms of security, PV230-M280 offers robust data protection with Advanced Encryption Standard and Trusted Computing Group (TCG) Opal (optional) to safeguard against unauthorized access. It also incorporates various advanced features, including flash block management, DataDefender, TRIM, page mapping, Hyper Cache technology, over-provisioning, DataRAID, SMART Read Refresh, NVMe secure erase, and power saving modes.

With exceptional performance, proven reliability, and enhanced data protection, PV230-M280 is the ideal storage or cache solution for a variety of applications, including industrial, imaging, computing, and enterprise markets.

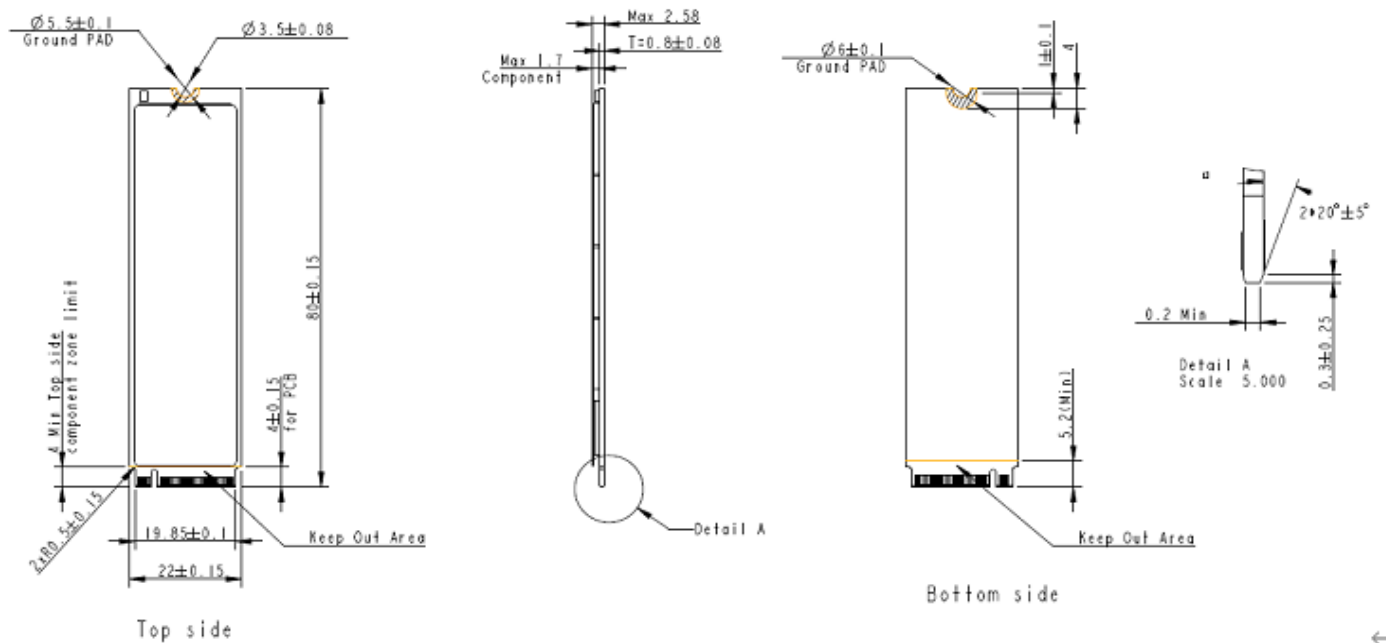
## Features

- Low-Density Parity-Check (LDPC) Code
- Global Wear-leveling
- Flash Bad-block Management
- End-to-End Data Protection
- Flash Translation Layer: Page Mapping
- DataDefender™
- TRIM
- Hyper Cache Technology
- Over-provisioning
- DataRAID
- SMART Read Refresh
- NVMe Secure Erase

## Specifications

<b>Model Name</b>	PV230-M280
<b>Interface</b>	PCIe Gen3 x4
<b>Connector</b>	Single-sided M.2 2280-M
<b>Form Factor</b>	M.2 2280
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	120GB-1920GB
<b>External DRAM</b>	No
<b>Sustained Read Performance (MB/sec.)</b>	Up to 3560
<b>Sustained Write Performance (MB/sec.)</b>	Up to 2705
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPS (4K Random Write)</b>	325K
<b>Standard Operating Temperature ( °C )</b>	0 ~ 70
<b>Extended Operating Temperature ( °C )</b>	-40 ~ 85
<b>Storage Temperature ( °C )</b>	-55 ~ 100
<b>Housing</b>	No
<b>Thermal Sensor</b>	Yes
<b>Shock</b>	Operation: Acceleration, 50(G)/11(ms)/half sine (Compliant with MIL-STD-202G) Non-operation: Acceleration, 1500(G)/0.5(ms)/half sine (Compliant with MIL-STD-883K)
<b>Vibration</b>	Operation: 7.69 GRMS, 20~2000 Hz/random (Compliant with MIL-STD-810G) Non-operation: 4.02 GRMS, 15~2000 Hz/random (Compliant with MIL-STD-810G)
<b>Operating Voltage</b>	3.3 V ± 5%
<b>Power Consumption</b>	Active Mode: 1,840 mA / Idle Mode: 200mA
<b>Dimension (L x W x H )</b>	22.00 x 80.00 x 2.58 (max.)
<b>MTBF (Hours)</b>	>3,000,000

## Mechanical Specifications



**For more information,  
contact your Apacer representative**

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