

Dear Partners:

Chinese New Year will start from Feb. 18~23. Powertip office will close during this period. Please feel free to send us the mail and we'll reply you asap after vacation. Below please check updated News Release.

- We are pleased to offer Y2015 Mono price list –Please check attachment. Please also refer to attached updated TFT product list.
- Mono model—1602 NPC series  
 Hereby introduce **New Powertip Character LCD** module which can provide short lead time with cost effective solution. Please refer to the followings as detail information. If there is new project using character 16\*2 module, highly recommend to submit NPC module.

1) 1602 NPC is available for 1602-F, 1602-G, 1602-J series.

2) NPC model uses smart liquid crystal. VOP below 5v, Operating temp. is -20~70C.

Product Series	Outline Dimension	LCD Display		Powertip model Replacement	Winstar model Compatible
		V/A	A/A		
<b>1602-F</b>	85*30*13.2(Max)	66*16	56.2*11.5	PC1602-F	WH1602A
<b>1602-G</b>	85*30*13.2(Max)	66*16	56.2*11.5	PC1602-G PC1602-G-P2	WH1602B WH1602W,WH1602J WH1602B1,B3
<b>1602-J</b>	85*30*13.2(Max)	66*16	56.2*11.5	PC1602-J PC1602-H  PC1602-I	WH1602-D WH1602C WH1602P WH1602M

### Absolute Maximum Ratings

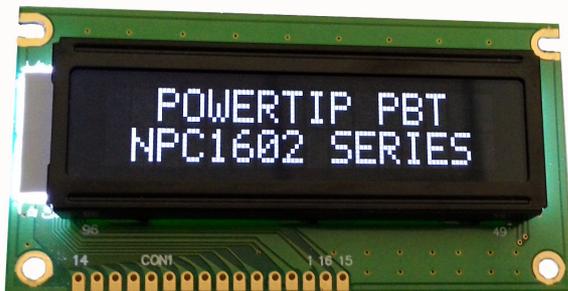
Item	Symbol	Condition	Min.	Max.	Unit
Power Supply Voltage	V <sub>DD</sub>	—	-0.3	7.0	V
LCD Driver Supply Voltage	V <sub>LCD</sub>	—	V <sub>DD</sub> -10.0	V <sub>DD</sub> +0.3	
Input Voltage	V <sub>IN</sub>	—	-0.3	V <sub>DD</sub> +0.3	V

Operating Temperature	T <sub>OP</sub>	—	-20	70	°C
Storage Temperature	T <sub>ST</sub>	—	-30	80	°C

### DC Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Logic Supply Voltage	V <sub>DD</sub>	—	4.5	5.0	5.5	V
LCM Driver Voltage	V <sub>OP</sub>	-20°C	4.6	4.7	4.8	V
		25°C	4.3	4.5	4.7	
		70°C	4.1	4.3	4.5	

- OLED-like (It's also called PBT or VATN)  
1602 NPC (1602-F, 1602-G, 1602-J) is available for OLED-like display with wide viewing angle and high contrast. Available backlight options: white/Yellow green/Blue/Red



Coming soon: 1602-L, 2002-B and 2004-A NPC series.

- TN Lcd with capacitive touch key in ITO glass  
Powertip provides different kinds of Capacitive Touch Keys Sensor or Modules with different configurations based on customer's mechanical design.
  - CTP key in ITO glass
  - High transparency & thin & Light weight
  - Excellent sensitivity with Innovative design
  - Customized touch screen for application: air conditioner controller pad, Telephone key pad, Safe control pad.

Touch key example as below.



- Product Change Notice- B/L PCN for PE12864-001, PE12864-055 series.
  - Due to improvement of LED ability, blow models will have higher brightness with no other change. Orders will follow below change. Thank you.

Models

Item	Model No.
1	PE12864LRF-001H05Q
2	PE12864LRF-001HC1Q
3	PE12864LRF-001HY4Q
4	PE12864LRF-055HC1Q

- A. LCM outline size/Appearance—No difference
- B. Electrical parameter—No difference
- C. B/L Brightness comparison

Brightness(cd/m2)	Typ
Original	10
Current	22.5

*Happy Chinese New Year of the goat!*

