pst-art-led: PostScript LED Display

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Contents

1 Metadata

Package File	pst-art-led.sty
Package Name	pst-art-led
Version Number	1.0.0
Release Date	2026/06/26
Dependencies	xcolor, pstricks
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Repository	github.com/manthanwar/pst-art

2 Introduction

An LED 5 x 7 dot matrix is a rectangular grid of 35 light-emitting diodes arranged in 5 columns and 7 rows. It acts as a single, highly customizable display module used to show alphanumeric characters, simple graphics, or symbols in electronic projects. Because they are bright, compact, and affordable, they are widely used in hobbyist DIY builds and industrial panels as information boards or displays.

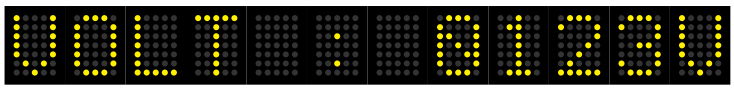
This PostScript package handles the input string and maps character data, translating text strings into

precise column and row signals to lit the led using simple `ledColorOn=<color-name>` option passed to the `\psLed<csname>[<options>]{<string>}` command. It bridges the gap between retro aesthetic design and professional document typesetting. It allows users to programmatically generate scalable, clean matrix-style graphics, such as custom alphanumeric characters or pixel art, without relying on external image editors. It integrates pixel or matrix-style graphics natively into standard documents, making it ideal for technical documentation, science tutorials, or retro-computing projects.

3 String to LED Display

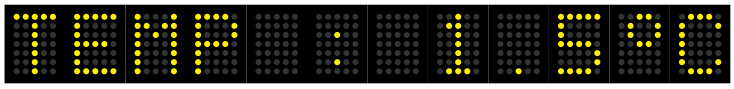
3.1 Example 1

```
\psset{unit=1mm,fillstyle=solid,linestyle=none}
\psset{ledColorOn=yellow,ledWidth=8,ledDistance=12}
\rput(10mm,-8mm){\psLedDisplay{Volt}}
```



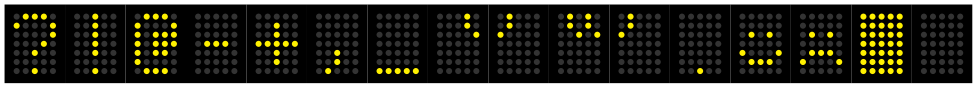
3.2 Example 2

```
\rput(0,-8mm){\psLedDisplay{Temp ~ : ~ 1.5 \degree C}}
```

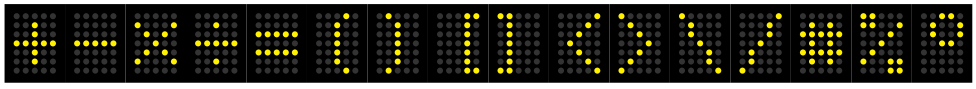


3.3 Symbols

```
\rput(0,-8mm){\psLedDisplay{? ! @ - + , _ .
\quoteL \quoteR \quoteLD \quoteRD \smiley \smileySad \on \off}}
```



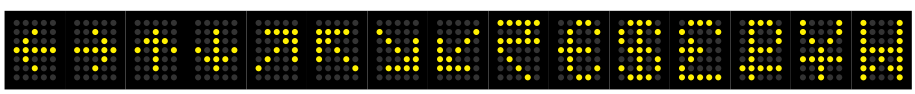
```
\rput(0,-8mm){\psLedDisplay{\plus \minus \multiply \divide
    = ( ) [ ] < > \backslash / \# \% \degree \on \off}}
```



Notice two different ways to get the plus sing using: `+` and `\plus`. Also, either `~` or `\off` results in space or led turned off.

3.4 Arrows and Currencies

```
\rput(0,-8mm){\psLedDisplay{\arrowL \arrowR \arrowU \arrowD
    \arrowNE \arrowNW \arrowSE \arrowSW
    \inr \eur \usd \gbp \rub \yen \won}}
```



3.5 Single Character

This  character 'A' is lit by `\rput(-4mm,0){\psLedDisplay[ledWidth=4, ledColorOn=green]{A}}`. Notice the clever user of `\rput` to precisely position the led. Make sure that the command options are set to `\psset{unit=1mm, fillstyle=solid,linestyle=none, ledColorOn=yellow, ledWidth=3}` prior to calling the command. We recommend you set these options globally. Note that the `ledWidth` is given in mm. The default led size is 20 mm and unit set to 1 mm. We recommend you use mm unit or convert other units for appropriate scaling before using.

4 Commands

The settings `\psset{<options>}` followed by command `\psLedDisplay{<string>}` or combined together `\psLedDisplay[<options>]{<string>}` achieves required results. This `\psLedDisplay` command internally uses the following set of characters.

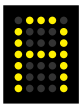
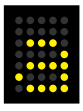
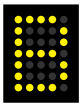
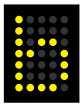
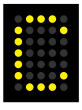
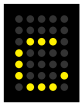
4.1 Command options

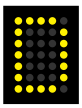
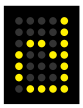
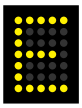
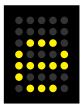
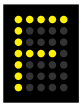
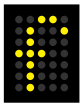
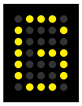
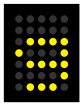
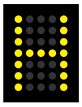
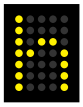
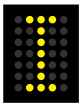
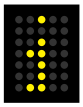
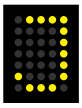
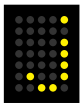
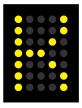
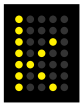
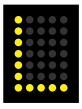
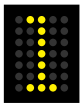
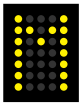
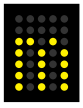
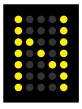
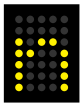
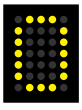
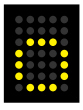
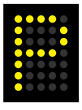
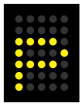
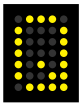
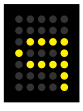
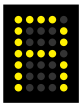
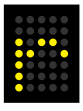
The following options control the behaviour of the script. They can be set by using `\psset{key=value}`. They can also be grouped together with comma separated key value pairs, i.e. a single comma followed by multiple 'option=value' pairs.

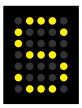
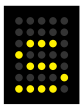
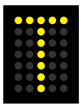
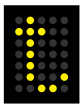
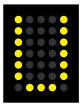
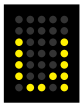
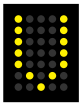
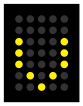
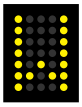
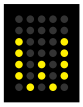
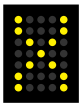
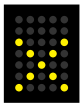
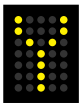
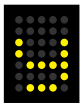
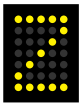
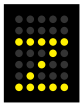
Key	Value	Remark
ledColorOn	color	\psset{ledColorOn=red}
ledColorOff	color	
ledColorBacklit	color	background color
ledWidth	color	
ledDistance	color	width + separation

For the choices of color names refer to xcolor package that provides driver-independent access to advanced color definitions, tinting, and blending.

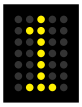
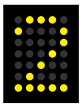
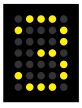
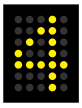
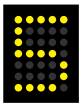
4.2 Letters

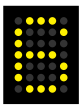
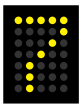
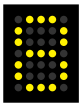
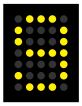
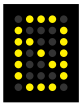
Command	Uppercase	Lowercase
`\psLedA \psLeda`		
`\psLedB \psLedb`		
`\psLedC \psLedc`		

Command	Uppercase	Lowercase
\psLedD \psLedd		
\psLedE \psLede		
\psLedF \psLedf		
\psLedG \psLedg		
\psLedH \psLedh		
\psLedI \psLedi		
\psLedJ \psLedj		
\psLedK \psLedk		
\psLedL \psLedl		
\psLedM \psLedm		
\psLedN \psLedn		
\psLedO \psLedo		
\psLedP \psLedp		
\psLedQ \psLedq		
\psLedR \psLedr		

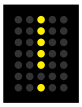
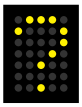
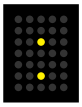
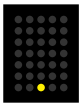
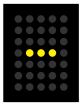
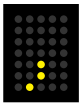
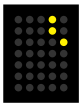
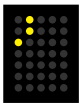
Command	Uppercase	Lowercase
\psLedS \psLeds		
\psLedT \psLedt		
\psLedU \psLedu		
\psLedV \psLedv		
\psLedW \psLedw		
\psLedX \psLedx		
\psLedY \psLedy		
\psLedZ \psLedz		

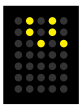
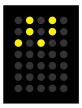
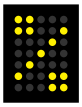
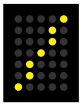
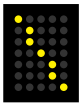
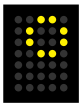
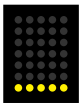
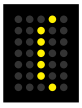
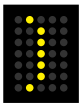
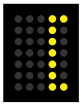
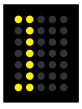
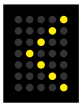
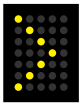
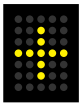
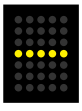
4.3 Numbers

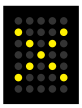
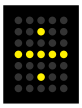
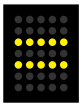
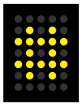
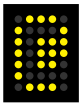
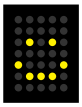
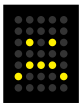
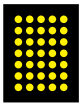
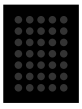
Command	Output	Remark
\psLedNA		
\psLedNB		
\psLedNC		
\psLedND		
\psLedNE		

Command	Output	Remark
\psLedNF		
\psLedNG		
\psLedNH		
\psLedNI		
\psLedNJ		

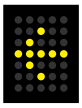
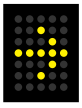
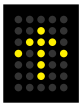
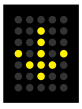
4.4 Symbols

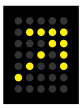
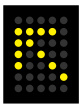
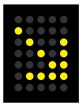
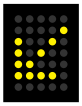
Command	Output	Remark
\psLedExclamation		
\psLedQuestion		
\psLedColon		
\psLedPeriod		
\psLedDash		
\psLedComma		
\psLedQuoteL		single quote left
\psLedQuoteR		single quote right

Command	Output	Remark
\psLedQuoteLD		double quote left
\psLedQuoteRD		double quote right
\psLedPercent		
\psLedSlash		
\psLedBackslash		
\psLedDegree		
\psLedUnderscore		
\psLedBracketLeft		
\psLedBracketRight		
\psLedBracketSquareLeft		
\psLedBracketSquareRight		
\psLedBracketAngleLeft		
\psLedBracketAngleRight		
\psLedPlus		
\psLedMinus		

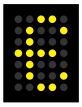
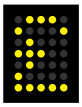
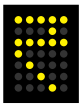
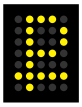
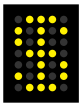
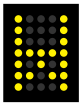
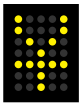
Command	Output	Remark
\psLedMultiply		
\psLedDivide		
\psLedEqual		
\psLedHash		
\psLedAmpersand		
\psLedSmiley		
\psLedSmileySad		
\psLedOn		
\psLedOff		

4.5 Arrows

Command	Output	Remark
\psLedArrowL		left
\psLedArrowR		right
\psLedArrowU		up
\psLedArrowD		down

Command	Output	Remark
\psLedArrowNE		north east
\psLedArrowNW		north west
\psLedArrowSE		south east
\psLedArrowSW		south west

4.6 Currency

Command	Output	Remark
\psLedEUR		Euro
\psLedGBP		Pound
\psLedINR		Rupee
\psLedRUB		Rubble
\psLedUSD		Dollar
\psLedWON		Won
\psLedYEN		Yen/Yuan