

Cheat sheet for pst-optexp (v4.0)

General component parameters

labeloffset= $\langle num \rangle$
labelstyle= $\langle macros \rangle$
labelalign= $\langle refpoint \rangle$
labelangle= $\langle num \rangle$
labelref=relative, relgrav, global, absolute
label= $\langle offset \rangle$ [$\langle angle \rangle$] [$\langle refpoint \rangle$] [$\langle labelref \rangle$]]
innerlabel=true
position= $\langle num \rangle$, start, end
abspos= $\langle num \rangle$, start, end
endbox=true, false
angle= $\langle num \rangle$
rotateref= $\langle refpoint \rangle$
compshift= $\langle num \rangle$
compoffset= $\langle num \rangle$
innercompalign=rel, relative, abs, absolute
OptComp $\langle psstyle \rangle$
OptionalStyle $\langle psstyle \rangle$
VariableStyle $\langle psstyle \rangle$
addtoOptComp= $\langle list \rangle$
newOptComp= $\langle list \rangle$
optional=true, false

Free-ray components

$\backslash lens$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

lensheight= $\langle num \rangle$
lensradiusleft= $\langle num \rangle$
lensradiusright= $\langle num \rangle$
lensradius= $\langle left \rangle$ [$\langle right \rangle$]
lenswidth= $\langle num \rangle$
lens= $\langle radiusleft \rangle$ [$\langle radiusright \rangle$] [$\langle height \rangle$] [$\langle width \rangle$]]
thicklens=true, false

$\backslash optplate$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

plateheight= $\langle num \rangle$
platelinewidth= $\langle num \rangle$ or $\langle dimen \rangle$

$\backslash optretplate$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

platewidth= $\langle num \rangle$
platesize= $\langle width \rangle$ $\langle height \rangle$

$\backslash pinhole$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

outerheight= $\langle num \rangle$
innerheight= $\langle num \rangle$
phlinewidth= $\langle num \rangle$ or $\langle dimen \rangle$
phwidth= $\langle num \rangle$

$\backslash optbox$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

optboxwidth= $\langle num \rangle$
optboxheight= $\langle num \rangle$
optboxsize= $\langle width \rangle$ $\langle height \rangle$

$\backslash optarrowcomp$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

arrowcompwidth= $\langle num \rangle$
arrowcompheight= $\langle num \rangle$
arrowcompsize= $\langle size \rangle$ or $\langle width \rangle$ $\langle height \rangle$
arrowcompangle= $\langle num \rangle$
arrowcompshape=rectangle, circle
ArrowCompStyle $\langle psstyle \rangle$

$\backslash optbarcomp$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

barcompwidth= $\langle num \rangle$
barcompheight= $\langle num \rangle$
barcompsize= $\langle size \rangle$ or $\langle width \rangle$ $\langle height \rangle$
barcompangle= $\langle num \rangle$
barcompshape=rectangle, circle
BarCompStyle $\langle psstyle \rangle$

$\backslash crystal$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

crystalwidth= $\langle num \rangle$
crystalheight= $\langle num \rangle$
crystalsize= $\langle width \rangle$ $\langle height \rangle$
caxislength= $\langle num \rangle$
caxisinv=true, false
voltage=true, false
lamp=true, false
CrystalCaxis $\langle psstyle \rangle$
CrystalLamp $\langle psstyle \rangle$

$\backslash optdiode$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

optdiodesize= $\langle num \rangle$

$\backslash doveprism$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

doveprismsize= $\langle num \rangle$ or $\langle width \rangle$ $\langle height \rangle$

$\backslash glanthompson$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

glanthompsonwidth= $\langle num \rangle$
glanthompsonheight= $\langle num \rangle$
glanthompsonsize= $\langle width \rangle$ $\langle height \rangle$
glanthompsongap= $\langle num \rangle$

$\backslash polarization$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

polsize= $\langle num \rangle$
poltype=parallel, perp, misc, lcirc, rcirc
Polarization $\langle psstyle \rangle$

$\backslash mirror$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

mirrorwidth= $\langle num \rangle$
mirrorlinewidth= $\langle num \rangle$ or $\langle dimen \rangle$
mirrorradius= $\langle radius \rangle$ [0]
mirrortype=plain, piezo, extended, semitrans
variable=true, false
mirrordepth= $\langle num \rangle$
ExtendedMirror $\langle psstyle \rangle$
PiezoMirror $\langle psstyle \rangle$
SemitransMirror $\langle psstyle \rangle$

$\backslash beamsplitter$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

bssize= $\langle num \rangle$
bsstyle=cube, plate

$\backslash optgrating$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

gratingwidth= $\langle num \rangle$
gratingheight= $\langle num \rangle$
gratingdepth= $\langle num \rangle$
gratingcount= $\langle int \rangle$
gratingtype=blazed, binary
gratingalign=t, top, c, center
reverse=true, false
gratinglinewidth= $\langle num \rangle$ or $\langle dimen \rangle$

$\backslash optprism$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

prismsize= $\langle num \rangle$
prismangle= $\langle num \rangle$
prismalign=auto, center

$\backslash rightangleprism$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

raprismsize= $\langle num \rangle$

$\backslash pentaprism$ [$\langle opt \rangle$] ($\langle in \rangle$) ($\langle center \rangle$) ($\langle out \rangle$) { $\langle label \rangle$ }

pentaprismsize= $\langle num \rangle$

Fiber components

usefiberstyle=true, false

\optfiber[*<opt>*](*<in>*)(*<out>*){*<label>*}

fiberloops=*<int>*

fiberloopradius=*<num>*

fiberloopsep=*<num>*

\optamp[*<opt>*](*<in>*)(*<out>*){*<label>*}

optampsize=*<num>* or *<width>* *<height>*

\optmzm[*<opt>*](*<in>*)(*<out>*){*<label>*}

optmzmsize=*<num>* or *<width>* *<height>*

\polcontrol[*<opt>*](*<in>*)(*<out>*){*<label>*}

polcontrolsize=*<num>*

polcontroltype=linear, triangle

\optisolator[*<opt>*](*<in>*)(*<out>*){*<label>*}

isolatorsizes=*<num>* or *<width>* *<height>*

IsolatorArrow*<psstyle>*

\optswitch[*<opt>*](*<in>*)(*<out>*){*<label>*}

switchsize=*<num>* or *<width>* *<height>*

switchstyle=opened, closed

\fiberdelayline[*<opt>*](*<in>*)(*<out>*){*<label>*}

fdlsize=*<num>* or *<width>* *<height>*

FdlArrow*<psstyle>*

\optfiberpolarizer[*<opt>*](*<in>*)(*<out>*){*<label>*}

fiberpolsizes=*<num>* or *<width>* *<height>*

\optcirculator(*<left>*)(*<right>*)(*<bottom>*){*<label>*}

optcircsize=*<num>*

optcircangleA=*<num>*

optcircangleB=*<num>*

optcircangle=*<num>* *<num>*

OptCircArrow*<psstyle>*

\optcoupler(*<tl>*)(*<bl>*)(*<tr>*)(*
){<label>*}

\wdmcoupler(*<tl>*)(*<bl>*)(*<r>*){*<label>*}

\wdmsplitter(*<l>*)(*<tr>*)(*
){<label>*}

couplersizes=*<num>* or *<width>* *<height>*

couplersep=*<num>*

couplertype=none, ellipse, rectangle, cross

coupleralign=t, top, b, bottom, c, center

VariableCoupler*<psstyle>*

\fiberbox(*<in>*)(*<out>*){*<label>*}

fiberboxwidth=*<num>*

fiberboxheight=*<num>*

fiberboxsize=*<width>* *<height>*

fiberboxsep=*<num>*

fiberboxsepout=*<num>*

fiberboxcount=*<N>*x*<M>*

Electrical components

\eleccoupler(*<tl>*)(*<bl>*)(*<tr>*)(*
){<label>*}

eleccouplersizes=*<size>* or *<width>* *<height>*

eleccouplersep=*<num>*

eleccouplertype=standard, directional

eleccouplerinput=left, right

\elecsynthesizer(*<in>*)(*<out>*){*<label>*}

synthsize=*<size>* or *<width>* *<height>*

synthtype=sine, pulse, sawtooth, rectangle, triangle, custom

synthshape=circle, rectangle

SynthStyle*<psstyle>*

\elecmixer(*<left>*)(*<right>*)(*<bottom>*){*<label>*}

elecmixersizes=*<num>*

Hybrid components

\optfilter[*<opt>*](*<in>*)(*<out>*){*<label>*}

filtersizes=*<num>*

filtertype=bandpass, bandstop, lowpass, highpass

filterangle=*<num>*

FilterStyle*<psstyle>*

\fibercollimator(*<in>*)(*<A>*)(**)(*<out>*){*<label>*}

fibercolsize=*<num>* or *<width>* *<height>*

\optdetector[*<opt>*](*<in>*)(*<out>*){*<label>*}

detsizes=*<num>* or *<width>* *<height>*

detttype=round, diode

DetectorStyle*<psstyle>*

Special nodes

\oenode{*<node>*}{*<comp>*}

namingscheme=old, new

showoptdots=true, false

compname=*<string>*

\oenodeRefA{*<comp>*}

\oenodeRefB{*<comp>*}

\oenodeTrefA{*<comp>*}

\oenodeTrefB{*<comp>*}

\oenodeCenter{*<comp>*}

\oenodeLabel{*<comp>*}

\oenodeExt{*<comp>*}

extnode=*<refpoint>*

extnodealign=rel, relative, abs, absolute

\oenodeIfc{*<num>*}{*<comp>*}

\oenodeIn{*<comp>*}

\oenodeOut{*<comp>*}

\oenodeRotref{*<comp>*}

\oenodeBeam{*<num>*}

\oenodeBeamUp{*<num>*}

\oenodeBeamLow{*<num>*}

\oeBeamVec{*<num>*}

\oeBeamVecUp{*<num>*}

\oeBeamVecLow{*<num>*}

Connecting components

\drawbeam[*<options>*]{*<obj₁>*}{*<obj₂>*}...

raytrace=true, false

useNA=true, false

n=*<code>*

beampos=[*<x>*] *<y>*

beamangle=*<pscode>*

beamalign=rel, relative, abs, absolute

beampathskip=*<num>*

beaminside=true, false

beaminsidefirst=true, false

```
beaminsidelast=true, false
allowbeaminside=true, false
forcebeaminside=true, false
```

```
\optplane(<center>)
  beam=true, false
  Beam<psstyle>
  addtoBeam=<list>
  newBeam=<list>
  ArrowInsideMinLength=<pscode>
  ArrowInsideMaxLength=<pscode>

\drawwidebeam[<options>]{<obj1>}{<obj2>}...
  beamwidth=<pscode>
  beamdiv=<pscode>
  pswarning=true, false
  savebeampoints=true, false, <int>
  loadbeampoints=true, false, <int>
  savebeam=true, false
  loadbeam=true, false
  startinside=true, false
  stopinside=true, false

\drawfiber[<options>]{<obj1>}{<obj2>}...
  fiberalign=rel, relative, center, abs,
    absolute
  fiberangleA=<num>
  fiberangleB=<num>
  startnode=auto, N, 1, 2, ...
  stopnode=auto, N, 1, 2, ...
  Fiber<psstyle>
  addtoFiber=<list>
  newFiber=<list>
  fiberstyle=<string>
```

```
\drawwire[<options>]{<obj1>}{<obj2>}...
  wirealign=rel, relative, center, abs,
    absolute
  wireangleA=<num>
  wireangleB=<num>
  wirestyle=<string>
  addtoWire=<list>
  newWire=<list>
  Wire<psstyle>
```

```
fiber=[*+]none, all, i, o, <refpoint>
wire=[*+]none, all, i, o, <refpoint>
```

```
\begin{optexp}...\end{optexp}
```

```
\backlayer{<code>}
```

```
\frontlayer{<code>}
```

Custom components

```
\optdipole[<opt>](<in>)(<out>){<label>}
```

```
\opttripole[<opt>](<in>)(<center>)(<out>){<label>}
```

```
optdipolesize=<width>[<height>]
```

```
\newOptexpDipole[<fixopt>]{<name>}{<dftopt>}
```

```
\newOptexpTripole[<fixopt>]{<name>}{<dftopt>}
```

```
\newOptexpFiberDipole[<fixopt>]{<name>}{<dftopt>}
```

```
\newOptexpElecDipole[<fixopt>]{<name>}{<dftopt>}
```

Additional information

```
showifcnodes=true, false
```

```
IfcNodeStyle<psstyle>
```