

Cheat sheet for pst-optexp (v4.4)

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= $\langle pscode \rangle$
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 $\langle dimen \rangle$

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

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

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

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

raprismsize= $\langle num \rangle$

raprismalign=auto, center

`\pentaprism`[*<opt>*](*<in>*)(*<center>*)(*<out>*){*<label>*}
pentaprismsize=*<num>*

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>*}
isolatorsize=*<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>*}
fiberpolsize=*<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>*}
couplersize=*<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>*}
eleccouplersize=*<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>*}
elecmixersize=*<num>*

Hybrid components

`\optfilter`[*<opt>*](*<in>*)(*<out>*){*<label>*}
filtersize=*<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>*}
detsize=*<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>*}
`\oeBeamCenter`{*<num>*}
`\oeBeamVec`{*<num>*}
`\oeBeamVecUp`{*<num>*}
`\oeBeamVecLow`{*<num>*}
`\oeBeamVecMedian`{*<num>*}

Connecting components

`\drawbeam`[*<options>*]{*<obj₁<obj₂raytrace=true, false
useNA=true, false*

```

n=<code>
beampos=[<x> ]<y>
beamangle=<pscode>
beamalign=rel, relative, abs, absolute
beampathskip=<num>
beampathcount=<num>
beaminside=true, false
beaminsidefirst=true, false
beaminsidelast=true, false
allowbeaminside=true, false
forcebeaminside=true, false
startinsidecount=<num>
stopinsidecount=<num>
beamnodealign=vec, conn, vector, connection

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

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

\drawfiber[<options>]{<obj1>}{<obj2>}\dots
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>}\dots
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}\dots\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>

```