

Cheat sheet for pst-optexp (v4.6)

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= $\langle pstyle \rangle$
rotateref= $\langle refpoint \rangle$
compshift= $\langle num \rangle$
compoffset= $\langle num \rangle$
innercompalign=rel, relative, abs, absolute
OptComp $\langle pstyle \rangle$
OptionalStyle $\langle pstyle \rangle$
VariableStyle $\langle pstyle \rangle$
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 $\langle pstyle \rangle$

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

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 $\langle pstyle \rangle$

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

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 $\langle pstyle \rangle$
CrystalLamp $\langle pstyle \rangle$

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

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 $\langle pstyle \rangle$

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

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 $\langle pstyle \rangle$
PiezoMirror $\langle pstyle \rangle$
SemitransMirror $\langle pstyle \rangle$

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

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
usewirestyle=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*}
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*) (*br*) {*label*}
`\wdmcoupler` (*tl*) (*bl*) (*r*) {*label*}
`\wdmsplitter` (*l*) (*tr*) (*br*) {*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*) (*br*) {*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*) (*B*) (*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
extnodes=*list*

`\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*} {*obj₂*} ...
raytrace=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>
fade <linestyle>
fadeto=white, black, transparency
fadepoints=<num>
fadefuncname=gauss, linear, squared, exp,
custom
fadefunc=<PS code>

\drawwidebeam[<options>]{<obj1>}{<obj2>}...
beamwidth=<pscode>
beamdiv=<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>}...
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[<options>](<in>)(<out>){<comp>}{<label>}
\opttripole[<options>](<in>)(<center>)(<out>){<comp>}{<label>}

optdipolesize=<width>[ <height>]
optdipolecomp=<macros>
opttripolecomp=<macros>

\newOptexpDipole[<fixopt>]{<name>}{<dftopt>}
\newOptexpTripole[<fixopt>]{<name>}{<dftopt>}
\newOptexpFiberDipole[<fixopt>]{<name>}{<dftopt>}
\newOptexpElecDipole[<fixopt>]{<name>}{<dftopt>}

```

Additional information

```

showifcnodes=true, false
IfcNodeStyle <psstyle>

```