

Cheat sheet for pst-optexp (v4.8)

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= $\langle num \rangle$
glanthompsonsiz= $\langle width \rangle$ $\langle height \rangle$
glanthompsongap= $\langle num \rangle$

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

polsiz= $\langle num \rangle$
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 $\langle psstyle \rangle$

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

bssiz= $\langle num \rangle$
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 $\langle dimen \rangle$

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

$\backslash optaom$ [$\langle options \rangle$] ($\langle in \rangle$) ($\langle trans \rangle$) ($\langle diff \rangle$) { $\langle label \rangle$ }

aomheight= $\langle num \rangle$
aomwidth= $\langle num \rangle$
aomsize= $\langle width \rangle$ $\langle height \rangle$
aomgratingcount= $\langle int \rangle$
aomalign=symmetric, straight
aomreflalign=perp, parallel
aomcomp=default, $\langle macro \rangle$

```
diffractionorders= $\langle int \rangle$ 
beamdiffractiorder= $\langle int \rangle$ 
```

```
\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
```

```
\rightangleprism[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle center \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
raprismsize= $\langle num \rangle$ 
raprismalign=auto, center
```

```
\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
usewirestyle=true, false
```

```
\optfiber[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
fiberloops= $\langle int \rangle$ 
fiberloopradius= $\langle num \rangle$ 
fiberloopsep= $\langle num \rangle$ 
```

```
\optamp[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
optampsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
```

```
\optmzm[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
optmzmsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
```

```
\polcontrol[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
polcontrolsize= $\langle num \rangle$ 
polcontroltype=linear, triangle
```

```
\optisolator[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
isolatorsizes= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
IsolatorArrow  $\langle psstyle \rangle$ 
```

```
\optswitch[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
switchsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
switchstyle=opened, closed
```

```
\fiberdelayline[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
fdlsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
FdLArrow  $\langle psstyle \rangle$ 
```

```
\optfiberpolarizer[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
fiberpolsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
```

```
\optcirculator( $\langle left \rangle$ )( $\langle right \rangle$ )( $\langle bottom \rangle$ ){ $\langle label \rangle$ }
optcircsize= $\langle num \rangle$ 
optcircangleA= $\langle num \rangle$ 
optcircangleB= $\langle num \rangle$ 
optcircangle= $\langle num \rangle$   $\langle num \rangle$ 
OptCircArrow  $\langle psstyle \rangle$ 
```

```
\optcoupler( $\langle tl \rangle$ )( $\langle bl \rangle$ )( $\langle tr \rangle$ )( $\langle br \rangle$ ){ $\langle label \rangle$ }
```

```
\wdmcoupler( $\langle tl \rangle$ )( $\langle bl \rangle$ )( $\langle r \rangle$ ){ $\langle label \rangle$ }
```

```
\wdmsplitter( $\langle l \rangle$ )( $\langle tr \rangle$ )( $\langle br \rangle$ ){ $\langle label \rangle$ }
couplersize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
couplersep= $\langle num \rangle$ 
couplertype=none, ellipse, rectangle, cross
coupleralign=t, top, b, bottom, c, center
VariableCoupler  $\langle psstyle \rangle$ 
```

```
\fiberbox( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
fiberboxwidth= $\langle num \rangle$ 
fiberboxheight= $\langle num \rangle$ 
fiberboxsize= $\langle width \rangle$   $\langle height \rangle$ 
fiberboxsep= $\langle num \rangle$ 
fiberboxsepout= $\langle num \rangle$ 
fiberboxcount= $\langle N \rangle \times \langle M \rangle$ 
```

Electrical components

```
\eleccoupler( $\langle tl \rangle$ )( $\langle bl \rangle$ )( $\langle tr \rangle$ )( $\langle br \rangle$ ){ $\langle label \rangle$ }
```

```
eleccouplersize= $\langle size \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
eleccouplersep= $\langle num \rangle$ 
eleccouplertype=standard, directional
eleccouplerinput=left, right
```

```
\elecsynthesizer( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
synthsize= $\langle size \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
synthtype=sine, pulse, sawtooth, rectangle,
triangle, custom
synthshape=circle, rectangle
SynthStyle  $\langle psstyle \rangle$ 
```

```
\elecmmixer( $\langle left \rangle$ )( $\langle right \rangle$ )( $\langle bottom \rangle$ ){ $\langle label \rangle$ }
elecmmixersize= $\langle num \rangle$ 
```

Hybrid components

```
\optfilter[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
```

```
filtersize= $\langle num \rangle$ 
filtertype=bandpass, bandstop, lowpass,
highpass
filterangle= $\langle num \rangle$ 
FilterStyle  $\langle psstyle \rangle$ 
```

```
\fibercollimator( $\langle in \rangle$ )( $\langle A \rangle$ )( $\langle B \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
fibercolsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
```

```
\optdetector[ $\langle opt \rangle$ ]( $\langle in \rangle$ )( $\langle out \rangle$ ){ $\langle label \rangle$ }
detsize= $\langle num \rangle$  or  $\langle width \rangle$   $\langle height \rangle$ 
detttype=round, diode
DetectorStyle  $\langle psstyle \rangle$ 
```

Special nodes

```
\oenode{ $\langle node \rangle$ }{ $\langle comp \rangle$ }
```

```
namingscheme=old, new
showoptdots=true, false
compname= $\langle string \rangle$ 
```

```
\oenodeRefA{ $\langle comp \rangle$ }
```

```
\oenodeRefB{ $\langle comp \rangle$ }
```

```
\oenodeTrefA{ $\langle comp \rangle$ }
```

```
\oenodeTrefB{ $\langle comp \rangle$ }
```

```
\oenodeCenter{ $\langle comp \rangle$ }
```

```
\oenodeLabel{ $\langle comp \rangle$ }
```

```
\oenodeExt{ $\langle comp \rangle$ }
```

```
extnode= $\langle refpoint \rangle$ 
```

```
extnodealign=rel, relative, abs, absolute
```

```
extnodes= $\langle list \rangle$ 
```

```
\oenodeIfc{ $\langle num \rangle$ }{ $\langle comp \rangle$ }
```

```
\oenodeIn{ $\langle comp \rangle$ }
```

```
\oenodeOut{ $\langle comp \rangle$ }
```

```
\oenodeRotref{ $\langle comp \rangle$ }
```

```
\oenodeBeam{ $\langle num \rangle$ }
```

```
\oenodeBeamUp{ $\langle num \rangle$ }
```

```
\oenodeBeamLow{ $\langle num \rangle$ }
```

```
\oeBeamCenter{ $\langle num \rangle$ }
```

```

\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⟩
beammode=refl, trans, reflective, transmittive,
auto
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⟩
showinterfaces=true, false
IfcStyle ⟨psstyle⟩

```