Cheat sheet for pst-optexp (v5.2)

General component parameters

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

Free-ray components

\lens[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}

lensheight=⟨*num*⟩
lensradiusleft=⟨*num*⟩
lensradiusright=⟨*num*⟩
lensradius=⟨*left*⟩[⟨*right*⟩]
lenswidth=⟨*num*⟩
lens=⟨*radiusleft*⟩[⟨*radiusright*⟩[⟨*height*⟩[⟨*width*⟩]]]
thicklens=true, false

\asphericlens[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
asphereheight=⟨*num*⟩
asphere width=⟨*num*⟩
asphereradiusleft=⟨*num*⟩
asphereradiusright=⟨*num*⟩
asphereconstant=⟨*num*⟩
aspherecoefficients=⟨A_4⟩ [⟨A_6⟩ [⟨A_8⟩ [⟨A_{10}⟩]]]

\optplate[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
plateheight=⟨*num*⟩
platelinewidth=⟨*num*⟩ or ⟨*dimen*⟩

\optretplate[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
platewidth=⟨*num*⟩
platesize=⟨*width*⟩ ⟨*height*⟩

\pinhole[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
outerheight=⟨*num*⟩
innerheight=⟨*num*⟩
phlinewidth=⟨*num*⟩ or ⟨*dimen*⟩
phwidth=⟨*num*⟩

\optbox[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
optboxwidth=⟨*num*⟩
optboxheight=⟨*num*⟩
optboxsize=⟨*width*⟩ ⟨*height*⟩

\optarrowcomp[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
arrowcompwidth=⟨*num*⟩
arrowcompheight=⟨*num*⟩
arrowcompsize=⟨*size*⟩ or ⟨*width*⟩ ⟨*height*⟩
arrowcompangle=⟨*num*⟩
arrowcompshape=rectangle, circle
ArrowCompStyle ⟨*psstyle*⟩

\optbarcomp[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
barcompwidth=⟨*num*⟩
barcompheight=⟨*num*⟩
barcompsize=⟨*size*⟩ or ⟨*width*⟩ ⟨*height*⟩
barcompangle=⟨*num*⟩
barcompshape=rectangle, circle
BarCompStyle ⟨*psstyle*⟩

\optsource[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
sourcewidth=⟨*num*⟩
sourceheight=⟨*num*⟩
sourcesize=⟨*width*⟩ ⟨*height*⟩

\crystal[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
crystalwidth=⟨*num*⟩
crystalheight=⟨*num*⟩
crystalsize=⟨*width*⟩ ⟨*height*⟩
caxislength=⟨*num*⟩
caxisinv=true, false
voltage=true, false
lamp=true, false
CrystalCaxis ⟨*psstyle*⟩
CrystalLamp ⟨*psstyle*⟩

\optdiode[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
optdiodesize=⟨*num*⟩

\doveprism[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
doveprismsize=⟨*num*⟩ or ⟨*width*⟩ ⟨*height*⟩

\glanthompson[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
glanthompsonwidth=⟨*num*⟩
glanthompsonheight=⟨*num*⟩
glanthompsonsize=⟨*width*⟩ ⟨*height*⟩
glanthompsongap=⟨*num*⟩

\polarization[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
polsize=⟨*num*⟩
poltype=parallel, perp, misc, lcirc, rcirc
Polarization ⟨*psstyle*⟩

\optwedge[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
wedgeheight=⟨*num*⟩
wedgeanglerright=⟨*num*⟩
wedgeangleleft=⟨*num*⟩
wedgeangles=⟨*left*⟩[⟨*right*⟩]
wedgewidth=⟨*num*⟩

\axicon[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
axiconheight=⟨*num*⟩
axiconwidth=⟨*num*⟩
axiconangle=⟨*num*⟩

\mirror[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
mirrorwidth=⟨*num*⟩
mirrorlinewidth=⟨*num*⟩ or ⟨*dimen*⟩
mirrorradius=⟨*radius*⟩[0]
mirrortype=plain, piezo, extended, semitrans
variable=true, false
mirrordepth=⟨*num*⟩
ExtendedMirror ⟨*psstyle*⟩
PiezoMirror ⟨*psstyle*⟩

SemitransMirror ⟨*psstyle*⟩

\parabolicmirror[⟨*opt*⟩](⟨*in*⟩)(⟨*out*⟩){⟨*label*⟩}
parmirrorwidth=⟨*num*⟩
parmirrorheight=⟨*num*⟩

\oapmirror[⟨*options*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*focus*⟩){⟨*label*⟩}
oapmirroraperture=⟨*num*⟩ or ⟨*inner*⟩ ⟨*outer*⟩

\beamsplitter[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
bssize=⟨*num*⟩
bsstyle=cube, plate

\optgrating[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
gratingwidth=⟨*num*⟩
gratingheight=⟨*num*⟩
gratingdepth=⟨*num*⟩
gratingcount=⟨*int*⟩
gratingtype=blazed, binary
gratingalign=t, top, c, center
reverse=true, false
gratinglinewidth=⟨*num*⟩ or ⟨*dimen*⟩

\transmissiongrating[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
\optaom[⟨*options*⟩](⟨*in*⟩)(⟨*trans*⟩)(⟨*diff*⟩){⟨*label*⟩}
aomheight=⟨*num*⟩
aomwidth=⟨*num*⟩
aomsize=⟨*width*⟩ ⟨*height*⟩
aomgratingcount=⟨*int*⟩
aomalign=symmetric, straight
aomreflalign=perp, parallel
aomcomp=default, ⟨*macro*⟩
diffractionorders=⟨*int*⟩
beamdiffractionorder=⟨*int*⟩

\optprism[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
prismsize=⟨*num*⟩
prismangle=⟨*num*⟩
prismtype=transmittive, reflective
prismalign=auto, center

\rightangleprism[⟨*opt*⟩](⟨*in*⟩)(⟨*center*⟩)(⟨*out*⟩){⟨*label*⟩}
raprismsize=⟨*num*⟩
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*⟩}
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*⟩)(⟨*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*⟩
fiberboxsepin=⟨*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⟩
  dettype=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,
    firstcomp
  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⟩}{⟨la

  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*⟩