Cheat sheet for pst-optexp (v6.1)

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*⟩
aspherewidth=⟨*num*⟩
aspereradiusleft=⟨*num*⟩
asphereradiusright=⟨*num*⟩
asphereconstant=⟨*num*⟩
asperecoefficients=⟨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*⟩
wedgeangleright=⟨*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*⟩}

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*⟩]{⟨obj_1⟩}{⟨obj_2⟩}...

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*⟩]{⟨obj_1⟩}{⟨obj_2⟩}...
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*⟩]{⟨obj_1⟩}{⟨obj_2⟩}...
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*⟩]{⟨obj_1⟩}{⟨obj_2⟩}...
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*⟩