* Rank 0 tensor.

$$[G]$$

$$G = G_s^{(1)}$$

* Rank 1 tensor.

$$\begin{bmatrix} 0 & G_y & 0 \end{bmatrix}$$

$$G_y = G_{py}^{(1)}$$

* Rank 2 tensor (s).

$$\begin{bmatrix} G_{xx} & 0 & G_{xz} \\ 0 & G_{yy} & 0 \\ G_{xz} & 0 & G_{zz} \end{bmatrix}$$

$$G_{xx} = -G_{du}^{(1)} + G_{dv}^{(1)} + G_s^{(1)}$$
$$G_{xz} = G_{dxz}^{(1)}$$
$$G_{yy} = -G_{du}^{(1)} - G_{dv}^{(1)} + G_s^{(1)}$$
$$G_{zz} = 2G_{du}^{(1)} + G_s^{(1)}$$

* Rank 2 tensor (a).

$$\begin{bmatrix} 0 & 0 & G_{xz} \\ 0 & 0 & 0 \\ -G_{xz} & 0 & 0 \end{bmatrix}$$

$$G_{xz} = -Q_{py}^{(1)}$$

* Rank 3 tensor (s).

$$\begin{bmatrix} 0 & G_{xxy} & 0 \\ 0 & G_{yyy} & 0 \\ 0 & G_{zzy} & 0 \\ G_{yzx} & 0 & G_{yzz} \\ 0 & G_{zxy} & 0 \\ G_{xyx} & 0 & G_{xyz} \end{bmatrix}$$

$$G_{xxy} = -G_{fay}^{(1)} - G_{fby}^{(1)} + G_{py}^{(1)} + 2Q_{dxz}^{(1)}$$
$$G_{yyy} = 2G_{fay}^{(1)} + G_{py}^{(1)} + 2G_{py}^{(2)}$$
$$G_{zzy} = -G_{fay}^{(1)} + G_{fby}^{(1)} + G_{py}^{(1)} - 2Q_{dxz}^{(1)}$$
$$G_{yzx} = G_{f3}^{(1)} - 3Q_{du}^{(1)} - Q_{dv}^{(1)}$$
$$G_{yzz} = -G_{fay}^{(1)} + G_{fby}^{(1)} + G_{py}^{(2)} + Q_{dxz}^{(1)}$$
$$G_{zxy} = G_{f3}^{(1)} + 3Q_{du}^{(1)} - Q_{dv}^{(1)}$$
$$G_{xyx} = -G_{fay}^{(1)} - G_{fby}^{(1)} + G_{py}^{(2)} - Q_{dxz}^{(1)}$$
$$G_{xyz} = G_{f3}^{(1)} + 2Q_{dv}^{(1)}$$

* Rank 3 tensor (a).

$$\begin{bmatrix} G_{yzx} & 0 & G_{yzz} \\ 0 & G_{zxy} & 0 \\ G_{xyx} & 0 & G_{xyz} \end{bmatrix}$$

$$G_{yzx} = -Q_{du}^{(2)} + Q_{dv}^{(2)} + Q_s^{(1)}$$

$$G_{yzz} = -G_{py}^{(3)} + Q_{dxz}^{(2)}$$

$$G_{zxy} = -Q_{du}^{(2)} - Q_{dv}^{(2)} + Q_s^{(1)}$$

$$G_{xyx} = G_{py}^{(3)} + Q_{dxz}^{(2)}$$

$$G_{xyz} = 2Q_{du}^{(2)} + Q_s^{(1)}$$

* Rank 4 tensor (sss).

$$\begin{bmatrix} G_{xxxx} & G_{xxyy} & G_{xxzz} & 0 & G_{xxzx} & 0 \\ G_{xxyy} & G_{yyyy} & G_{yyzz} & 0 & G_{yyzx} & 0 \\ G_{xxzz} & G_{yyzz} & G_{zzzz} & 0 & G_{zzzx} & 0 \\ 0 & 0 & 0 & G_{yzyz} & 0 & G_{yzxy} \\ G_{xxzx} & G_{yyzx} & G_{zzzx} & 0 & G_{zxzx} & 0 \\ 0 & 0 & 0 & G_{yzxy} & 0 & G_{xyxy} \end{bmatrix}$$

$$G_{xxxx} = -2G_{du}^{(1)} - 4G_{du}^{(2)} + 2G_{dv}^{(1)} + 4G_{dv}^{(2)} - G_{gu}^{(1)} + G_{gv}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{xxyy} = -2G_{du}^{(1)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{xxzz} = G_{du}^{(1)} + G_{dv}^{(1)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{xxzx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} - G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{yyyy} = -2G_{du}^{(1)} - 4G_{du}^{(2)} - 2G_{dv}^{(1)} - 4G_{dv}^{(2)} - G_{gu}^{(1)} - G_{gv}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{yyzz} = G_{du}^{(1)} - G_{dv}^{(1)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{yyzx} = G_{dxz}^{(1)} + 2G_{gby}^{(1)}$$

$$G_{zzzz} = 4G_{du}^{(1)} + 8G_{du}^{(2)} + 2G_{gu}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{zzzx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{yzyz} = G_{du}^{(2)} - G_{dv}^{(2)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)}$$

$$G_{yzxy} = G_{dxz}^{(2)} + 2G_{gby}^{(1)}$$

$$G_{zxzx} = G_{du}^{(2)} + G_{dv}^{(2)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)}$$

$$G_{xyxy} = -2G_{du}^{(2)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(2)}$$

* Rank 4 tensor (ssa).

$$\begin{bmatrix} 0 & G_{xxyy} & G_{xxzz} & 0 & G_{xxzx} & 0 \\ -G_{xxyy} & 0 & G_{yyzz} & 0 & G_{yyzx} & 0 \\ -G_{xxzz} & -G_{yyzz} & 0 & 0 & G_{zzzx} & 0 \\ 0 & 0 & 0 & 0 & 0 & G_{yzxy} \\ -G_{xxzx} & -G_{yyzx} & -G_{zzzx} & 0 & 0 & 0 \\ 0 & 0 & 0 & -G_{yzxy} & 0 & 0 \end{bmatrix}$$

$$G_{xxyy} = -2G_{dv}^{(3)} + 4Q_{f3}^{(1)}$$

$$G_{xxzz} = 3G_{du}^{(3)} - G_{dv}^{(3)} - 4Q_{f3}^{(1)}$$

$$G_{xxzx} = G_{dxz}^{(3)} + 2Q_{fay}^{(1)} + 2Q_{fby}^{(1)} - 2Q_{py}^{(1)}$$

$$G_{yyzz} = 3G_{du}^{(3)} + G_{dv}^{(3)} + 4Q_{f3}^{(1)}$$

$$G_{yyzx} = G_{dxz}^{(3)} - 4Q_{fby}^{(1)}$$

$$G_{zzzx} = G_{dxz}^{(3)} - 2Q_{fay}^{(1)} + 2Q_{fby}^{(1)} + 2Q_{py}^{(1)}$$

$$G_{yzxy} = 4Q_{fay}^{(1)} + Q_{py}^{(1)}$$

* Rank 4 tensor (aas).

$$\begin{bmatrix} G_{yzyz} & 0 & G_{yzxy} \\ 0 & G_{zxzx} & 0 \\ G_{yzxy} & 0 & G_{xyxy} \end{bmatrix}$$

$$G_{yzyz} = -2G_{du}^{(4)} + 2G_{dv}^{(4)} + G_s^{(3)}$$

$$G_{yzxy} = 2G_{dxz}^{(4)}$$

$$G_{zxzx} = -2G_{du}^{(4)} - 2G_{dv}^{(4)} + G_s^{(3)}$$

$$G_{xyxy} = 4G_{du}^{(4)} + G_s^{(3)}$$

* Rank 4 tensor (aaa).

$$\begin{bmatrix} 0 & 0 & G_{yzxy} \\ 0 & 0 & 0 \\ -G_{yzxy} & 0 & 0 \end{bmatrix}$$

$$G_{yzxy} = Q_{py}^{(2)}$$

* Rank 4 tensor (sa).

$$\begin{bmatrix} 0 & G_{xxzx} & 0 \\ 0 & G_{yyzx} & 0 \\ 0 & G_{zzzx} & 0 \\ G_{yzyz} & 0 & G_{yzxy} \\ 0 & G_{zxzx} & 0 \\ G_{xyyz} & 0 & G_{xyxy} \end{bmatrix}$$

$$G_{xxzx} = 2G_{dxz}^{(5)} - Q_{fay}^{(2)} - Q_{fby}^{(2)} + Q_{py}^{(3)}$$

$$G_{yyzx} = 2Q_{fay}^{(2)} + Q_{py}^{(3)} + 2Q_{py}^{(4)}$$

$$G_{zzzx} = -2G_{dxz}^{(5)} - Q_{fay}^{(2)} + Q_{fby}^{(2)} + Q_{py}^{(3)}$$

$$G_{yzyz} = -3G_{du}^{(5)} - G_{dv}^{(5)} + Q_{f3}^{(2)}$$

$$G_{yzxy} = G_{dxz}^{(5)} - Q_{fay}^{(2)} + Q_{fby}^{(2)} + Q_{py}^{(4)}$$

$$G_{zxzx} = 3G_{du}^{(5)} - G_{dv}^{(5)} + Q_{f3}^{(2)}$$

$$G_{xyyz} = -G_{dxz}^{(5)} - Q_{fay}^{(2)} - Q_{fby}^{(2)} + Q_{py}^{(4)}$$

$$G_{xyxy} = 2G_{dv}^{(5)} + Q_{f3}^{(2)}$$

* Rank 4 tensor (as).

$$\begin{bmatrix} 0 & 0 & 0 & G_{yzyz} & 0 & G_{yzxy} \\ G_{zxxx} & G_{zxyy} & G_{zxzz} & 0 & G_{zxzx} & 0 \\ 0 & 0 & 0 & G_{xyyz} & 0 & G_{xyxy} \end{bmatrix}$$

$$G_{yzyz} = -3G_{du}^{(6)} - G_{dv}^{(6)} + Q_{f3}^{(3)}$$

$$G_{yzxy} = -G_{dxz}^{(6)} - Q_{fay}^{(3)} - Q_{fby}^{(3)} + Q_{py}^{(6)}$$

$$G_{zxxx} = 2G_{dxz}^{(6)} - Q_{fay}^{(3)} - Q_{fby}^{(3)} + Q_{py}^{(5)}$$

$$G_{zxyy} = 2Q_{fay}^{(3)} + Q_{py}^{(5)} + 2Q_{py}^{(6)}$$

$$G_{zxzz} = -2G_{dxz}^{(6)} - Q_{fay}^{(3)} + Q_{fby}^{(3)} + Q_{py}^{(5)}$$

$$G_{zxzx} = 3G_{du}^{(6)} - G_{dv}^{(6)} + Q_{f3}^{(3)}$$

$$G_{xyyz} = G_{dxz}^{(6)} - Q_{fay}^{(3)} + Q_{fby}^{(3)} + Q_{py}^{(6)}$$

$$G_{xyxy} = 2G_{dv}^{(6)} + Q_{f3}^{(3)}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} G_{xxxx} & G_{xxyy} & G_{xxzz} & 0 & G_{xxzx} & 0 & 0 & G_{xxxz} & 0 \\ G_{yyxx} & G_{yyyy} & G_{yyzz} & 0 & G_{yyzx} & 0 & 0 & G_{yyxz} & 0 \\ G_{zzxx} & G_{zzyy} & G_{zzzz} & 0 & G_{zzzx} & 0 & 0 & G_{zzxz} & 0 \\ 0 & 0 & 0 & G_{yzyz} & 0 & G_{yzxy} & G_{yzzy} & 0 & G_{yzyx} \\ G_{zxxx} & G_{zxyy} & G_{zxzz} & 0 & G_{zxzx} & 0 & 0 & G_{zxxz} & 0 \\ 0 & 0 & 0 & G_{xyyz} & 0 & G_{xyxy} & G_{xyzy} & 0 & G_{xyyx} \end{bmatrix}$$

$$G_{xxxx} = -2G_{du}^{(1)} - 4G_{du}^{(2)} + 2G_{dv}^{(1)} + 4G_{dv}^{(2)} - G_{gu}^{(1)} + G_{gv}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{xxyy} = -2G_{du}^{(1)} - 2G_{dv}^{(3)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(1)} + 4Q_{f3}^{(1)}$$

$$G_{xxzz} = G_{du}^{(1)} + 3G_{du}^{(3)} + G_{dv}^{(1)} - G_{dv}^{(3)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)} - 4Q_{f3}^{(1)}$$

$$G_{xxzx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} + 2G_{dxz}^{(5)} - G_{gay}^{(1)} - G_{gby}^{(1)} + 2Q_{fay}^{(1)} - Q_{fay}^{(2)} + 2Q_{fby}^{(1)} - Q_{fby}^{(2)} - 2Q_{py}^{(1)} + Q_{py}^{(3)}$$

$$G_{xxxz} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} - 2G_{dxz}^{(5)} - G_{gay}^{(1)} - G_{gby}^{(1)} + 2Q_{fay}^{(1)} + Q_{fay}^{(2)} + 2Q_{fby}^{(1)} + Q_{fby}^{(2)} - 2Q_{py}^{(1)} - Q_{py}^{(3)}$$

$$G_{yyxx} = -2G_{du}^{(1)} + 2G_{dv}^{(3)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(1)} - 4Q_{f3}^{(1)}$$

$$G_{yyyy} = -2G_{du}^{(1)} - 4G_{du}^{(2)} - 2G_{dv}^{(1)} - 4G_{dv}^{(2)} - G_{gu}^{(1)} - G_{gv}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{yyzz} = G_{du}^{(1)} + 3G_{du}^{(3)} - G_{dv}^{(1)} + G_{dv}^{(3)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)} + 4Q_{f3}^{(1)}$$

$$G_{yyzx} = G_{dxz}^{(1)} + G_{dxz}^{(3)} + 2G_{gby}^{(1)} + 2Q_{fay}^{(2)} - 4Q_{fby}^{(1)} + Q_{py}^{(3)} + 2Q_{py}^{(4)}$$

$$G_{yyxz} = G_{dxz}^{(1)} + G_{dxz}^{(3)} + 2G_{gby}^{(1)} - 2Q_{fay}^{(2)} - 4Q_{fby}^{(1)} - Q_{py}^{(3)} - 2Q_{py}^{(4)}$$

$$G_{zzxx} = G_{du}^{(1)} - 3G_{du}^{(3)} + G_{dv}^{(1)} + G_{dv}^{(3)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)} + 4Q_{f3}^{(1)}$$

$$G_{zzyy} = G_{du}^{(1)} - 3G_{du}^{(3)} - G_{dv}^{(1)} - G_{dv}^{(3)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)} - 4Q_{f3}^{(1)}$$

$$G_{zzzz} = 4G_{du}^{(1)} + 8G_{du}^{(2)} + 2G_{gu}^{(1)} + 2G_g^{(1)} + G_s^{(1)} + 2G_s^{(2)}$$

$$G_{zzzx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} - 2G_{dxz}^{(5)} + G_{gay}^{(1)} - G_{gby}^{(1)} - 2Q_{fay}^{(1)} - Q_{fay}^{(2)} + 2Q_{fby}^{(1)} + Q_{fby}^{(2)} + 2Q_{py}^{(1)} + Q_{py}^{(3)}$$

$$G_{zzxz} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} + 2G_{dxz}^{(5)} + G_{gay}^{(1)} - G_{gby}^{(1)} - 2Q_{fay}^{(1)} + Q_{fay}^{(2)} + 2Q_{fby}^{(1)} - Q_{fby}^{(2)} + 2Q_{py}^{(1)} - Q_{py}^{(3)}$$

$$G_{yzyz} = G_{du}^{(2)} - 3G_{du}^{(5)} - G_{dv}^{(2)} - G_{dv}^{(5)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)} + Q_{f3}^{(2)}$$

$$G_{yzxy} = G_{dxz}^{(2)} + G_{dxz}^{(5)} + 2G_{gby}^{(1)} + 4Q_{fay}^{(1)} - Q_{fay}^{(2)} + Q_{fby}^{(2)} + Q_{py}^{(1)} + Q_{py}^{(4)}$$

$$G_{yzzy} = G_{du}^{(2)} + 3G_{du}^{(5)} - G_{dv}^{(2)} + G_{dv}^{(5)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)} - Q_{f3}^{(2)}$$

$$G_{yzyx} = G_{dxz}^{(2)} - G_{dxz}^{(5)} + 2G_{gby}^{(1)} + 4Q_{fay}^{(1)} + Q_{fay}^{(2)} - Q_{fby}^{(2)} + Q_{py}^{(1)} - Q_{py}^{(4)}$$

$$G_{zxxx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} - G_{dxz}^{(3)} - G_{gay}^{(1)} - G_{gby}^{(1)} - 2Q_{fay}^{(1)} - 2Q_{fby}^{(1)} + 2Q_{py}^{(1)}$$

$$G_{zxyy} = G_{dxz}^{(1)} - G_{dxz}^{(3)} + 2G_{gby}^{(1)} + 4Q_{fby}^{(1)}$$

$$G_{zxzz} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} - G_{dxz}^{(3)} + G_{gay}^{(1)} - G_{gby}^{(1)} + 2Q_{fay}^{(1)} - 2Q_{fby}^{(1)} - 2Q_{py}^{(1)}$$

$$G_{zxzx} = G_{du}^{(2)} + 3G_{du}^{(5)} + G_{dv}^{(2)} - G_{dv}^{(5)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)} + Q_{f3}^{(2)}$$

$$G_{zxxz} = G_{du}^{(2)} - 3G_{du}^{(5)} + G_{dv}^{(2)} + G_{dv}^{(5)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(2)} - Q_{f3}^{(2)}$$

$$G_{xyyz} = G_{dxz}^{(2)} - G_{dxz}^{(5)} + 2G_{gby}^{(1)} - 4Q_{fay}^{(1)} - Q_{fay}^{(2)} - Q_{fby}^{(2)} - Q_{py}^{(1)} + Q_{py}^{(4)}$$

$$G_{xyxy} = -2G_{du}^{(2)} + 2G_{dv}^{(5)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(2)} + Q_{f3}^{(2)}$$

$$G_{xyzy} = G_{dxz}^{(2)} + G_{dxz}^{(5)} + 2G_{gby}^{(1)} - 4Q_{fay}^{(1)} + Q_{fay}^{(2)} + Q_{fby}^{(2)} - Q_{py}^{(1)} - Q_{py}^{(4)}$$

$$G_{xyyx} = -2G_{du}^{(2)} - 2G_{dv}^{(5)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(2)} - Q_{f3}^{(2)}$$

* Rank 4 tensor (a).

$$\begin{bmatrix} 0 & 0 & 0 & G_{yzyz} & 0 & G_{yzxy} & G_{yzzy} & 0 & G_{yzyx} \\ G_{zxxx} & G_{zxyy} & G_{zxzz} & 0 & G_{zxzx} & 0 & 0 & G_{zxxz} & 0 \\ 0 & 0 & 0 & G_{xyyz} & 0 & G_{xyxy} & G_{xyzy} & 0 & G_{xyyx} \end{bmatrix}$$

$$G_{yzyz} = -2G_{du}^{(4)} - 3G_{du}^{(6)} + 2G_{dv}^{(4)} - G_{dv}^{(6)} + G_s^{(3)} + Q_{f3}^{(3)}$$

$$G_{yzxy} = 2G_{dxz}^{(4)} - G_{dxz}^{(6)} - Q_{fay}^{(3)} - Q_{fby}^{(3)} + Q_{py}^{(2)} + Q_{py}^{(6)}$$

$$G_{yzzy} = 2G_{du}^{(4)} - 3G_{du}^{(6)} - 2G_{dv}^{(4)} - G_{dv}^{(6)} - G_s^{(3)} + Q_{f3}^{(3)}$$

$$G_{yzyx} = -2G_{dxz}^{(4)} - G_{dxz}^{(6)} - Q_{fay}^{(3)} - Q_{fby}^{(3)} - Q_{py}^{(2)} + Q_{py}^{(6)}$$

$$G_{zxxx} = 2G_{dxz}^{(6)} - Q_{fay}^{(3)} - Q_{fby}^{(3)} + Q_{py}^{(5)}$$

$$G_{zxyy} = 2Q_{fay}^{(3)} + Q_{py}^{(5)} + 2Q_{py}^{(6)}$$

$$G_{zxzz} = -2G_{dxz}^{(6)} - Q_{fay}^{(3)} + Q_{fby}^{(3)} + Q_{py}^{(5)}$$

$$G_{zxzx} = -2G_{du}^{(4)} + 3G_{du}^{(6)} - 2G_{dv}^{(4)} - G_{dv}^{(6)} + G_s^{(3)} + Q_{f3}^{(3)}$$

$$G_{zxxz} = 2G_{du}^{(4)} + 3G_{du}^{(6)} + 2G_{dv}^{(4)} - G_{dv}^{(6)} - G_s^{(3)} + Q_{f3}^{(3)}$$

$$G_{xyyz} = 2G_{dxz}^{(4)} + G_{dxz}^{(6)} - Q_{fay}^{(3)} + Q_{fby}^{(3)} - Q_{py}^{(2)} + Q_{py}^{(6)}$$

$$G_{xyxy} = 4G_{du}^{(4)} + 2G_{dv}^{(6)} + G_s^{(3)} + Q_{f3}^{(3)}$$

$$G_{xyzy} = -2G_{dxz}^{(4)} + G_{dxz}^{(6)} - Q_{fay}^{(3)} + Q_{fby}^{(3)} + Q_{py}^{(2)} + Q_{py}^{(6)}$$

$$G_{xyyx} = -4G_{du}^{(4)} + 2G_{dv}^{(6)} - G_s^{(3)} + Q_{f3}^{(3)}$$

* Rank 4 tensor (t).

$$
\begin{bmatrix}
G_{xxxx} & 0 & G_{xxxz} \\
0 & G_{yyyy} & 0 \\
G_{zzzx} & 0 & G_{zzzz} \\
G_{yyzx} & 0 & G_{yyzz} \\
G_{zzxx} & 0 & G_{zzxz} \\
0 & G_{xxyy} & 0 \\
0 & G_{yzzy} & 0 \\
G_{zxxx} & 0 & G_{zxxz} \\
G_{xxyy} + G_{yyzz} - G_{yzzy} - G_{zxxz} + G_{zzxx} & 0 & G_{xyyz} \\
0 & G_{xyyz} + \frac{G_{zzxz}}{2} - \frac{G_{zzzx}}{2} & 0
\end{bmatrix}
$$

$$G_{xxxx} = -2G_{du}^{(1)} - 4G_{du}^{(2)} + 2G_{dv}^{(1)} + 4G_{dv}^{(2)} - G_{gu}^{(1)} + G_{gv}^{(1)} + 2G_g^{(1)} + 3G_s^{(1)}$$

$$G_{xxxz} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} - 2G_{dxz}^{(5)} - G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{yyyy} = -2G_{du}^{(1)} - 4G_{du}^{(2)} - 2G_{dv}^{(1)} - 4G_{dv}^{(2)} - G_{gu}^{(1)} - G_{gv}^{(1)} + 2G_g^{(1)} + 3G_s^{(1)}$$

$$G_{zzzx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} - 2G_{dxz}^{(5)} + G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{zzzz} = 4G_{du}^{(1)} + 8G_{du}^{(2)} + 2G_{gu}^{(1)} + 2G_g^{(1)} + 3G_s^{(1)}$$

$$G_{yyzx} = G_{dxz}^{(1)} + G_{dxz}^{(3)} + 2G_{gby}^{(1)}$$

$$G_{yyzz} = G_{du}^{(1)} + 3G_{du}^{(3)} - G_{dv}^{(1)} + G_{dv}^{(3)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{zzxx} = G_{du}^{(1)} - 3G_{du}^{(3)} + G_{dv}^{(1)} + G_{dv}^{(3)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{zzxz} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} + G_{dxz}^{(3)} + 2G_{dxz}^{(5)} + G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{xxyy} = -2G_{du}^{(1)} - 2G_{dv}^{(3)} + 2G_{gu}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{yzzy} = G_{du}^{(2)} + 3G_{du}^{(5)} - G_{dv}^{(2)} + G_{dv}^{(5)} - G_{gu}^{(1)} + G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{zxxx} = G_{dxz}^{(1)} + 2G_{dxz}^{(2)} - G_{dxz}^{(3)} - G_{gay}^{(1)} - G_{gby}^{(1)}$$

$$G_{zxxz} = G_{du}^{(2)} - 3G_{du}^{(5)} + G_{dv}^{(2)} + G_{dv}^{(5)} - G_{gu}^{(1)} - G_{gv}^{(1)} - G_g^{(1)} + G_s^{(1)}$$

$$G_{xyyz} = G_{dxz}^{(2)} - G_{dxz}^{(5)} + 2G_{gby}^{(1)}$$