

$O_7(3).2 \pmod{2}$

	blocks	defect	matrix
2.G :	1	11	108×10
	2	5	16×2
	3	3	8×1
	4	2	4×1
	5	2	4×1
6.G :	6	10	38×6
	7	4	8×2

Block 1:	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0}$	$\varphi_{4,0}$	φ_{5+}	$\varphi_{7,0}$	$\varphi_{8,0}$	$\varphi_{9,0}$	$\varphi_{10,0}$	φ_{11+}
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$	1	.	.	.	.	.	.	.	.	.
$78_1 = \chi_{2,0}$	.	1	.	.	.	.	.	.	.	.
$78_2 = \chi_{2,1}$	.	1	.	.	.	.	.	.	.	.
$91_1 = \chi_{3,0}$	1	.	1	.	.	.	.	.	.	.
$91_2 = \chi_{3,1}$	1	.	1	.	.	.	.	.	.	.
$105_1 = \chi_{4,0}$	1	.	.	1	.	.	.	.	.	.
$105_2 = \chi_{4,1}$	1	.	.	1	.	.	.	.	.	.
$168_1 = \chi_{5,0}$	.	1	1	.	.	.	.	.	.	.
$168_2 = \chi_{5,1}$	.	1	1	.	.	.	.	.	.	.
$182_1 = \chi_{6,0}$	.	1	.	1	.	.	.	.	.	.
$182_2 = \chi_{6,1}$	.	1	.	1	.	.	.	.	.	.
$195_1 = \chi_{7,0}$	1	.	1	1	.	.	.	.	.	.
$195_2 = \chi_{7,1}$	1	.	1	1	.	.	.	.	.	.
$520_1 = \chi_{8+}$	.	.	.	.	1	.	.	.	.	.
$273_1 = \chi_{10,0}$	1	1	1	1	.	.	.	.	.	.
$273_2 = \chi_{10,1}$	1	1	1	1	.	.	.	.	.	.
$546_1 = \chi_{11,0}$	.	1	.	.	.	1	.	.	.	.
$546_2 = \chi_{11,1}$	.	1	.	.	.	1	.	.	.	.
$819_1 = \chi_{12,0}$	1	.	1	2	1	.	.	.	.	.
$819_2 = \chi_{12,1}$	1	.	1	2	1	.	.	.	.	.
$1820_1 = \chi_{13+}$	.	2	.	2	1	2	.	.	.	.
$1092_1 = \chi_{15,0}$	.	.	.	.	.	.	1	.	.	.
$1092_2 = \chi_{15,1}$	.	.	.	.	.	.	1	.	.	.
$1365_1 = \chi_{16,0}$	1	1	1	2	1	1	.	.	.	.
$1365_2 = \chi_{16,1}$	1	1	1	2	1	1	.	.	.	.
$1365_3 = \chi_{17,0}$	1	1	1	.	.	.	.	1	.	.
$1365_4 = \chi_{17,1}$	1	1	1	.	.	.	.	1	.	.
$3120_1 = \chi_{18+}$	.	.	.	.	.	2	2	.	.	.
$1638_1 = \chi_{20,0}$	.	1	.	.	.	1	1	.	.	.
$1638_2 = \chi_{20,1}$	.	1	.	.	.	1	1	.	.	.
$1820_2 = \chi_{21,0}$	.	2	.	.	.	1	.	1	.	.
$1820_3 = \chi_{21,1}$	.	2	.	.	.	1	.	1	.	.
$2106_1 = \chi_{22,0}$	.	1	.	.	.	2	1	.	.	.
$2106_2 = \chi_{22,1}$	.	1	.	.	.	2	1	.	.	.
$2184_1 = \chi_{23,0}$	2	1	2	2	1	.	.	1	.	.
$2184_2 = \chi_{23,1}$	2	1	2	2	1	.	.	1	.	.
$2457_1 = \chi_{24,0}$	1	1	1	1	1	1	.	1	.	.
$2457_2 = \chi_{24,1}$	1	1	1	1	1	1	.	1	.	.
$2730_1 = \chi_{25,0}$	.	1	.	1	1	2	1	.	.	.

(Block 1:)	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0}$	$\varphi_{4,0}$	φ_{5+}	$\varphi_{7,0}$	$\varphi_{8,0}$	$\varphi_{9,0}$	$\varphi_{10,0}$	φ_{11+}
$2730_2 = \chi_{25,1}$	.	1	.	1	1	2	1	.	.	.
$2730_3 = \chi_{26,0}$	.	1	.	1	.	.	.	.	1	.
$2730_4 = \chi_{26,1}$	.	1	.	1	.	.	.	.	1	.
$2835_1 = \chi_{27,0}$	1	1	.	.	.	1	1	1	.	.
$2835_2 = \chi_{27,1}$	1	1	.	.	.	1	1	1	.	.
$4095_1 = \chi_{28,0}$	1	2	1	3	1	1	.	.	1	.
$4095_2 = \chi_{28,1}$	1	2	1	3	1	1	.	.	1	.
$4095_3 = \chi_{29,0}$	1	2	1	1	1	2	1	1	.	.
$4095_4 = \chi_{29,1}$	1	2	1	1	1	2	1	1	.	.
$4368_1 = \chi_{30,0}$	.	2	.	2	1	2	.	.	1	.
$4368_2 = \chi_{30,1}$	.	2	.	2	1	2	.	.	1	.
$4536_1 = \chi_{31,0}$	.	3	1	2	1	2	.	.	1	.
$4536_2 = \chi_{31,1}$	.	3	1	2	1	2	.	.	1	.
$5265_1 = \chi_{32,0}$	1	3	1	2	1	1	.	1	1	.
$5265_2 = \chi_{32,1}$	1	3	1	2	1	1	.	1	1	.
$5460_1 = \chi_{33,0}$	.	2	.	.	.	1	1	1	1	.
$5460_2 = \chi_{33,1}$	.	2	.	.	.	1	1	1	1	.
$5460_3 = \chi_{34,0}$	.	2	.	2	1	2	1	.	1	.
$5460_4 = \chi_{34,1}$	.	2	.	2	1	2	1	.	1	.
$5460_5 = \chi_{35,0}$	.	2	.	.	1	3	2	1	.	.
$5460_6 = \chi_{35,1}$	.	2	.	.	1	3	2	1	.	.
$6552_1 = \chi_{38,0}$	2	3	2	4	2	2	.	1	1	.
$6552_2 = \chi_{38,1}$	2	3	2	4	2	2	.	1	1	.
$14040_1 = \chi_{39+}$	.	.	.	.	1	4	2	.	.	1
$7280_1 = \chi_{41,0}$	.	4	.	.	.	2	1	2	1	.
$7280_2 = \chi_{41,1}$	.	4	.	.	.	2	1	2	1	.
$14560_1 = \chi_{42+}$	.	.	.	.	2	4	2	.	.	1
$7371_1 = \chi_{44,0}$	1	4	1	2	1	3	1	1	1	.
$7371_2 = \chi_{44,1}$	1	4	1	2	1	3	1	1	1	.
$16380_1 = \chi_{45+}$	.	2	.	2	1	2	.	.	2	1
$14742_1 = \chi_{48,0}$	.	1	.	1	1	2	1	.	1	1
$14742_2 = \chi_{48,1}$	.	1	.	1	1	2	1	.	1	1
$16380_2 = \chi_{49,0}$	.	2	.	.	1	3	1	1	1	1
$16380_3 = \chi_{49,1}$	.	2	.	.	1	3	1	1	1	1
$19683_1 = \chi_{56,0}$	1	3	.	1	1	5	3	1	1	1
$19683_2 = \chi_{56,1}$	1	3	.	1	1	5	3	1	1	1
$21840_1 = \chi_{57,0}$	.	4	.	.	2	6	3	2	1	1
$21840_2 = \chi_{57,1}$	.	4	.	.	2	6	3	2	1	1
$22113_1 = \chi_{58,0}$	1	5	1	3	2	5	2	1	2	1
$22113_2 = \chi_{58,1}$	1	5	1	3	2	5	2	1	2	1

(Block 1:)	$\varphi_{1,0}$	$\varphi_{2,0}$	$\varphi_{3,0}$	$\varphi_{4,0}$	φ_{5+}	$\varphi_{7,0}$	$\varphi_{8,0}$	$\varphi_{9,0}$	$\varphi_{10,0}$	φ_{11+}
$520_2 = \chi_{59,0}$	.	.	.	.	1	.	.	.	.	.
$520_3 = \chi_{59,1}$	.	.	.	.	1	.	.	.	.	.
$1120_1 = \chi_{60+}$	4	.	2	4	1	.	.	.	.	.
$1456_1 = \chi_{62,0}$	.	.	.	.	1	2	.	.	.	.
$1456_2 = \chi_{62,1}$	.	.	.	.	1	2	.	.	.	.
$2912_1 = \chi_{63+}$	.	.	.	.	1	.	.	2	.	.
$3120_2 = \chi_{65,0}$	.	.	.	.	.	2	2	.	.	.
$3120_3 = \chi_{65,1}$	.	.	.	.	.	2	2	.	.	.
$3640_1 = \chi_{66,0}$	.	.	.	.	1	2	2	.	.	.
$3640_2 = \chi_{66,1}$	.	.	.	.	1	2	2	.	.	.
$13440_1 = \chi_{67+}$	4	8	6	8	4	4	.	2	2	.
$7280_3 = \chi_{69,0}$	.	4	.	.	1	4	2	2	.	.
$7280_4 = \chi_{69,1}$	.	4	.	.	1	4	2	2	.	.
$7280_5 = \chi_{70,0}$	.	4	.	4	1	2	.	.	2	.
$7280_6 = \chi_{70,1}$	.	4	.	4	1	2	.	.	2	.
$14560_2 = \chi_{71+}$	.	.	.	.	.	.	.	.	2	1
$10920_1 = \chi_{73,0}$	.	.	.	.	1	2	.	.	.	1
$10920_2 = \chi_{73,1}$	.	.	.	.	1	2	.	.	.	1
$13104_1 = \chi_{76,0}$	.	.	.	.	1	2	2	.	.	1
$13104_2 = \chi_{76,1}$	.	.	.	.	1	2	2	.	.	1
$26208_1 = \chi_{77+}$	.	8	.	.	1	8	4	2	2	1
$14040_2 = \chi_{79,0}$	.	.	.	.	1	4	2	.	.	1
$14040_3 = \chi_{79,1}$	.	.	.	.	1	4	2	.	.	1
$30240_1 = \chi_{80+}$	4	8	2	4	3	8	4	4	2	1
$21840_3 = \chi_{86,0}$	.	4	.	4	3	6	2	.	2	1
$21840_4 = \chi_{86,1}$	.	4	.	4	3	6	2	.	2	1
$21840_5 = \chi_{87,0}$	.	4	.	.	1	4	2	2	2	1
$21840_6 = \chi_{87,1}$	.	4	.	.	1	4	2	2	2	1

$$\begin{array}{ll}
\varphi_{1,0} & = 1_1 \\
\varphi_{2,0} & = 78_1 \\
\varphi_{3,0} & = 90_1 \\
\varphi_{4,0} & = 104_1 \\
\varphi_{5+} & = 520_1
\end{array}
\qquad
\begin{array}{ll}
\varphi_{7,0} & = 468_1 \\
\varphi_{8,0} & = 1092_1 \\
\varphi_{9,0} & = 1196_1 \\
\varphi_{10,0} & = 2548_1 \\
\varphi_{11+} & = 9464_1
\end{array}$$

Block 2:	$\varphi_{13,0}$	$\varphi_{14,0}$	
$5824_1 = \chi_{36,0}$	1	.	
$5824_2 = \chi_{36,1}$	1	.	
$5824_3 = \chi_{37,0}$	1	.	
$5824_4 = \chi_{37,1}$	1	.	
$11648_1 = \chi_{47,0}$	.	1	
$11648_2 = \chi_{47,1}$	.	1	
$17472_1 = \chi_{52,0}$	1	1	$\varphi_{13,0} = 5824_1$
$17472_2 = \chi_{52,1}$	1	1	$\varphi_{14,0} = 11648_1$
$17472_3 = \chi_{53,0}$	1	1	
$17472_4 = \chi_{53,1}$	1	1	
$11648_3 = \chi_{74,0}$	.	1	
$11648_4 = \chi_{74,1}$	.	1	
$11648_5 = \chi_{75,0}$	.	1	
$11648_6 = \chi_{75,1}$	.	1	
$23296_1 = \chi_{88,0}$	2	1	
$23296_2 = \chi_{88,1}$	2	1	

Block 3:	$\varphi_{15,0}$	
$16640_1 = \chi_{50,0}$	1	
$16640_2 = \chi_{50,1}$	1	
$16640_3 = \chi_{51,0}$	1	
$16640_4 = \chi_{51,1}$	1	$\varphi_{15,0} = 16640_1$
$16640_5 = \chi_{82,0}$	1	
$16640_6 = \chi_{82,1}$	1	
$16640_7 = \chi_{83,0}$	1	
$16640_8 = \chi_{83,1}$	1	

Block 4:	$\varphi_{16,0}$	
$17920_1 = \chi_{54,0}$	1	
$17920_2 = \chi_{54,1}$	1	$\varphi_{16,0} = 17920_1$
$17920_5 = \chi_{84,0}$	1	
$17920_6 = \chi_{84,1}$	1	

Block 5:	$\varphi_{17,0}$
$17920_3 = \chi_{55,0}$	1
$17920_4 = \chi_{55,1}$	1
$17920_7 = \chi_{85,0}$	1
$17920_8 = \chi_{85,1}$	1

$$\varphi_{17,0} = 17920_2$$

Block 6:	φ_{18+}	φ_{19+}	φ_{21+}	φ_{22+}	φ_{23+}	φ_{24+}
$54_1 = \chi_{89+}$	1	.	.	.	.	.
$702_1 = \chi_{90+}$	1	1	.	.	.	.
$702_2 = \chi_{91+}$	1	1	.	.	.	.
$756_1 = \chi_{92+}$	2	1	.	.	.	.
$4914_1 = \chi_{95+}$	1	.	.	.	.	1
$4914_2 = \chi_{96+}$	1	1	1	.	.	.
$4914_3 = \chi_{97+}$	1	1	1	.	.	.
$5616_1 = \chi_{98+}$	2	1	.	.	.	1
$5616_2 = \chi_{99+}$	2	1	.	.	.	1
$9828_1 = \chi_{100+}$	2	1	1	.	.	1
$9828_2 = \chi_{101+}$	2	1	1	.	.	1
$10530_1 = \chi_{102+}$	3	2	1	.	.	1
$14040_4 = \chi_{103+}$	2	.	.	1	1	1
$14742_3 = \chi_{104+}$	3	1	.	1	1	1
$14742_4 = \chi_{105+}$	3	1	.	1	1	1
$15120_1 = \chi_{106+}$	4	2	1	.	1	1
$15120_2 = \chi_{107+}$	4	2	1	1	.	1
$18954_1 = \chi_{108+}$	3	1	1	1	1	1
$19656_1 = \chi_{109+}$	4	2	1	1	1	1
$24570_1 = \chi_{110+}$	5	2	1	1	1	2
$24570_2 = \chi_{111+}$	5	2	1	1	1	2
$24570_3 = \chi_{112+}$	5	2	1	1	1	2
$24570_4 = \chi_{113+}$	5	2	1	1	1	2
$24570_5 = \chi_{114+}$	5	2	1	1	1	2
$29484_1 = \chi_{115+}$	6	3	2	1	1	2
$33696_1 = \chi_{116+}$	6	2	1	2	2	2
$39312_1 = \chi_{117+}$	8	3	1	2	2	3
$39312_2 = \chi_{118+}$	8	3	1	2	2	3
$39366_1 = \chi_{119+}$	9	3	1	2	2	3
$9072_1 = \chi_{123+}$	.	.	.	1	1	.
$24192_1 = \chi_{124+}$	4	2	2	1	.	2
$24192_2 = \chi_{125+}$	4	2	2	.	1	2
$28080_1 = \chi_{126+}$	4	.	.	2	2	2
$30240_2 = \chi_{127+}$	8	4	2	1	1	2
$39312_3 = \chi_{128+}$	8	4	2	2	2	2
$44928_3 = \chi_{130+}$	10	4	1	2	2	4
$44928_4 = \chi_{131+}$	10	4	1	2	2	4
$58320_1 = \chi_{134+}$	12	4	2	3	3	4

$$\begin{aligned}
\varphi_{18+} &= 54_1 \\
\varphi_{19+} &= 648_1 \\
\varphi_{21+} &= 4212_1 \\
\varphi_{22+} &= 4536_1 \\
\varphi_{23+} &= 4536_2 \\
\varphi_{24+} &= 4860_1
\end{aligned}$$

Block 7:	φ_{20+}	φ_{25+}
$3456_1 = \chi_{93+}$	1	.
$3456_2 = \chi_{94+}$	1	.
$44928_1 = \chi_{120+}$	1	1
$44928_2 = \chi_{121+}$	1	1
$48384_1 = \chi_{122+}$	2	1
$41472_1 = \chi_{129+}$	.	1
$48384_2 = \chi_{132+}$	2	1
$48384_3 = \chi_{133+}$	2	1

$$\begin{aligned} \varphi_{20+} &= 3456_1 \\ \varphi_{25+} &= 41472_1 \end{aligned}$$